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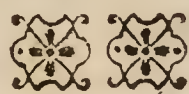


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THE
Family Companion
FOR
HEALTH:
Or, Plain, Easy, and Certain
RULES,
Which being Punctually
Observ'd *and* Follow'd,
Will INFALLIBLY keep
FAMILIES *free from* Diseases,
And PROCURE them a
LONG LIFE.

Proba est materia, si probum adhibeas artificem.

PLAUT.



L O N D O N:

Printed for F. FAYRAM, under the *Royal Exchange*
in *Cornhill*; and J. LEAKE, Bookseller in *Bath*.

M.DCC.XXIX.

Family & Company

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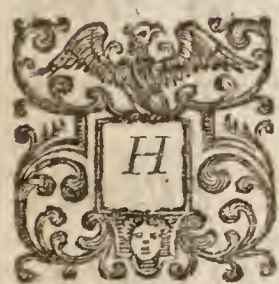
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TO THE
READER.



HAVING, for a long Series
of Years, endeavour'd to do
Service to my Country, in my
Profession, and having made
it my Business to make Observations for
the Preservation of its Health, as well
as for their Relief in many dangerous
Diseases, and being now in the last
Stage of Life; as a Witness of my good

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Wishes

TO the READER.

Wishes for the Publick, I publish these Thoughts, which are the Result of near a Fifty Years Experience, and which are, as far as my Years will permit me to examine, exactly agreeable, to all Experience whatever.

*I have very rarely run into any Reasoning, only where the Necessity of the Discourse requir'd such a Digression; for in giving such Directions as these are, it is not material, otherwise than to dress up the Matter for publick View: For Tastes are grown so extravagant, as not to admit of a Relation of useful Facts without some Embellishment. As to my own Opinion, I was rather for chusing to make it appear small and dogmatical: But my being
over-*

To the READER.

over-rul'd in this Affair, is owing to my Complaisance to the Persuasions of a Friend, whom I consulted on this Occasion.

*I enter'd upon Practice with the same Views, which I shall continue to improve, whilst my small Remainder of Life lasts; that is, I laid it down as a Maxim, That Reason should only second Experience; and that this same Reason should never prove hypothetical, I resolv'd never to admit of any Reason that should not answer all Cases that should befall me. My Steadiness in this Resolution has prov'd of great Service to me and my Patients, inasmuch as it has given me Reputation and Maintenance; and, if my
Advice*

To the READER.

Advice may still be taken, I exhort all young Practitioners to follow these my Steps, if they design any Ease to Themselves, or any Good to their Patients.

By this small Volume, the charitable House-Keepers, for whose Use it is written, will be enabled to give Relief to their Menials, without the Assistance of an Apothecary or Physician: It is a Charity on all Hands. The poor Servants are often in a miserable Condition, and the whole Family does not know the Want of them, till they are disabled with Sickness: If the Master or Mistress knew what would readily relieve them, they would never discharge them upon so trivial an Affair as they often do: If
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To the READER.

an Apothecary is call'd, he is so charitable as to give his Labour, and moreover even to charge his Drugs at the intrinsic Value; the Physician, if he is call'd to a Family he is employ'd in, never is so ungenerous as to take a Fee; the Family is not willing to draw Obligations upon them; so that this small Treatise is design'd for the Good of those poor Creatures, and for the Satisfaction of all: Here the good and charitable Ladies have Directions given them how to cure Diseases of most Kinds, without much more Expence than their Diet will be of: They are here instructed in what they are generally found to be delighted with, I mean, in being serviceable to their Neighbours: Their Reputation will grow equal to that of a Physician,

To the READER.

Physician, and, whenever they have the Opportunity given them, will act their Part as well.

This being the only Affair I was ever engag'd in, of this Kind, it is the last I shall attempt, and hope the Publick will receive my Endeavours kindly; and indeed, if I had an Inclination, my distant Journeys would not now admit of the Work: This Treatise, small as it is, has given me too much Fatigue ever to put Pen to Paper again. If it be approv'd of, I have my Aim.

If the Reader find any Errors of the Press, of Note, I hope he will be
so

To the READER.

so kind as to pardon them; because my Distance from the Metropolis oblig'd me to leave that Affair to other Persons.



THE

To the Reader

It is to be regretted that the
author has not been able to
give a more complete account of the
-157-





THE
Family Companion

FOR

HEALTH.



HEY who regard Life and their Healths, ought to be instructed nicely and minutely, and not to rely upon a few Generals: Their Safety depends on a strict Observation of the following Rules, which I have couch'd in as few Words as the Nature of the Affair will bear; and if I should any where be too prolix, I cannot but think it will merit Excuse, since the Advantage accrues to the Readers themselves. I promise Health and long Life to those who will obey, and can any greater Blessing be bestow'd by a Friend than these Jewels?

1. Whatever Plant or Vegetable springs up, it partakes of the Nature of the Soil where

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it grows ; and over and above the Virtues belonging to its Species, we may reckon in also the Auxiliary of the Soil : This is hardly dreamt of by those who deal the most in physical Matters, and may be the Occasion of many ill Successes among Practitioners ; for Example, Mint growing in a marshy and fatty Soil, is not the same Aromatick, it is when it grows on a Mountain.

2. Mankind itself draws its Nourishment and its Passions from the Place he lives in ; when our Nourishment gives Blood and Spirits of a peculiar Nature, our Passions are naturally of a like Disposition. It were easy to point out a Nation, where Mankind are plump and good like ; but whose Joints are thick, and whose Legs are equally shap'd from the Knee to the Ankle ; who are lazy, drowsy, and weak-headed ; who are neither sharp nor subtle, and whose Constitutions are moist ; and who neither can labour, nor love it therefore ; the Reason of all which depends upon the Moisture of their Country, and the Softness and Fatness of their Soil : Another Set of People might be nam'd, who are lean, hardy, hairy, nimble, fleshy, and muscular, capable of Fatigue, and industrious, and who withal are proud, sharp-witted, and warlike ; their Country is a Soil void of all Fence, hard, dry, rough, expos'd, and mountainous ; they are press'd with Cold in Winter, and Heat in Summer, from the Reflection of the Rocks or Sands : Another Country
abounds

abounds with Creatures as fickle as their Weather : It were possible to name another Nation, whose Inhabitants are of a manly and robust Constitution, whose Complexions are of a good Brown, who are proud and tenacious of their settled Opinions ; and all these Qualities they derive from their Soil, which is dry and bare, and is not subject to great Changes of Weather. If any Nation could be nam'd, where the Soil were dry, rough, mountainous, and who suffer various Changes of Weather, there Mankind would be large-bodied, strong, and fit for Fatigue, and would also be witty and warlike without Pride.

3. Fortitude of Mind and Body, is acquir'd by Labour and Fatigue ; but by want of Exercise and Laziness, the Mind becomes indolent. This Rule is made evident by the Vigour and Courage of our common Sailors, who become impatient under any Obstacle, nor do they cease from their Enterprizes, once begun, till they have surmounted them, or fall under them. The Reverse of this appears in a studious Life, where the Scholar is full of Apprehensions, and is bug-bear'd at every minute Difficulty : If a Student loses his Reason, he is full of Solicitude and Fear ; but if a Sailor turns giddy, he is enterprizing, and fights Windmills.

4. Servitude damps the Spirits ; but Freedom elates them : Cares and Troubles seldom fail of making Men lean and melancholick ; they rob us of our natural Rest, and take

away our Appetite ; how then can we avoid being wasted and affected in our Heads ? On the other Hand, Men in Prosperity, following their Reason, rest without Dreams, and awake serene and calm ; they eat at appointed Seasons, and act all under Direction ; nor need they dwell upon one Subject, and Variety gives Pleasure, where a Confinement to a Chain of Projects destroys the Spirits.

5. Custom has the Force of Nature ; we daily see Men us'd to Quarrels and Broils, to grow in love with them : It is a difficult Task for a Clown to grow polite : Covetous Men never cease to gripe, till Death stops their Career ; and the Bonzies in *China* make fine Markets of their Misers, by giving them Bills of Exchange upon their Correspondents in the next World. Wherefore avoid drawing on a Necessity upon Nature by an ill Habit ; the Drunkard answers his Physician, that To-morrow he bids adieu to his darling Vice, but quaffs on till he dies by the Excess. Thus it is, that Men us'd to Laws and Rules, become too magnanimous to deviate from their Neighbours : Were it not for this Force of Custom, Mankind would more often degenerate into Liberties, contrary to the Laws that are now prescrib'd them ; they would make no Scruple to transact Villainies as Pieces of Wit, which they forbear, because the Law is a Rule of Honour they have imbib'd early. Nothing besides Necessity, and that contracted habitually from their Infancy, will make them transgress

gress the Laws of a Country : None becomes wicked in an Instant : A Chain of Actions illegal, nibbled at for Years in private, and which have pass'd undiscover'd, embolden such Men to act openly at last, in Defiance to Honour and Law.

6. Hunting is a prejudicial Exercise for such as long for Children ; the Poor, therefore, are more burden'd with Children than the Rich : Thus is the World distributed, they who are in Want exceed the Number of Rich, the Rich emasculate themselves with Wealth, and Poverty enriches the Blood, and makes it fertile ; such Poverty is only meant as keeps us from Dependance : No Wonder we hear of Divorces and intestine Broils among the Wealthy ; the Ladies are not such ill Judges, as not to know who can quell their Heats, and gratify their Passions : Thus the Footman graces his Master's Couch. Excess of Riding consumes the Spirits, and bruises the virile Parts : If Hunting degenerates into a Trade, a brave Nation may chance to be unpeopled.

7. Water-drinking is unwholesome for fat and gross Bodies : Water, ever so pure, contains many Bodies hidden in it that are prejudicial. Mr. *Boyle* proves the most pure Water to contain Salt in it ; we can say, what Water does not contain, but it is too dogmatical to affirm what Particles are in it, till we try, and that requires more Skill, than even most Physicians have, to experiment. Such Constitutions continuing in a Course of Water-drink-

ing at all Times and Seasons, feel their Legs to swell ; they become feeble and incapable of Fatigue ; their Flesh grows flabby ; for a while they grow fatter, but that soon melts off, and they dwindle into Coughs and Asthma's, into Dropfies, and into Impotence in its largest Sense ; and a Looseness closes the Scene : Exercise alone prevents these Inconveniencies. But why should Men live so as to need a Remedy ? It must be a Prison that obliges a Man to work for his Life ; it must be a Crime when it obliges us to Expiation ; and, as to my own Part, I have no Notion, that I must be playing Pranks with Poison, to shew how I can cure myself.

Inhabitants of the same Country are troubled with the same Diseases : Thus Agues are common in *Kent*, Pleurifies in hot Countries, and Plagues in *Ægypt*. Each differs in his Diet, his Exercise, and Hours of Rest ; therefore a common and endemical Distemper depends on what all equally partake of, that is, on the Air : The *Ægyptians* creep into their Caves while the Southern Winds continue, but peep out again when the Northern Breezes begin : The *Kentish* Men are usually good Fellows, and in the *Campagna Romana* they avoid the *Serena's* : 'Tis every one's Concern to avoid the common Cause of Diseases ; if Necessity obliges and ties us down to an Abode in a distemper'd Air, the same spurs us up to seek a Remedy ; and as we have nothing to do with *Ægypt* or *Rome*, I think myself oblig'd

oblig'd to give my Countrymen some common, but effectual Remedies against our usual and endemical Disorders reigning in our several Counties; thus as Agues are the reigning Disease in the Marshes of *Kent*, I advise them to take the Bark in the following Manner: *Jesuits Bark in fine Powder an Ounce, Salt of Steel and Jamaica Pepper of each a Quarter of an Ounce, Molossus four Ounces: mix together, and take the Quantity of a Nutmeg three times a Day, when the Fit is off, and a Draught of Ale or White Wine after it. Note, That common green Copperas is better Salt of Steel, than any Chymist can make.* Thus have many succeeded well, and Authority has recommended it: We ought not immediately to fall to the Bark, but should either give a Dose of Physick or a Vomit before it, or suffer three or four Fits to pass over before we give it. A Consumption is another Disorder fatal to the *English*, and which we ought by all Means to avoid; Milk of any Kind is good, but more especially that of Asses; they who accustom themselves to Milks, are not readily inclin'd to Consumptions. Dropsies are not so much the Fault of the Country, as of Individuals swelling too much.

Moist Countries become healthful by Drains. A running Water carries off all Nastiness; or what would become of our Town of *Bath* in *Somersetshire*, were it not that the *Avon* receives all its Streams? and even *Lancashire* has its *Mersey*, *Ribble*, *Lon*, and *Irwell*, to

carry off all its Moisture. If the Rivers or Rivulets leave Mud behind, as it happens in *Lincolnshire* in the Fens, there Agues must be annual, if not continually reign among them ; for what grievously offends our Organs of Smell, must necessarily be offensive to the whole : These Steams are mostly Water and Sulphur of the grossest Sort, for Salt and Earth won't rise up.

A Country that is stormy, rainy, yet warm, and which drinks standing Waters, must be troubled with Diseases from Moisture and gross Nourishment ; the Constitution of such a People must be cachectical and dropical, they are effeminate and pale, they are troubled with Jaundices, they are hoarse and subject to Coughs, and also to Fevers ; pure Water is a fine Fluid, and will pass all our small Vessels, and carries Nourishment to every Part of us ; if it be impure, it carries what Parts it has along with it into our Blood-Vessels, and there brings Diseases ; the Warmth makes Water go deeper into our Vessels, for Warmth divides minute Bodies into minuter Parts, and then we receive all it dissolves into our Veins, and we are choak'd up with Obstructions of a very dangerous Nature. The Earth contains Salts and Sulphurs in its Bowels, and if Water stands, it licks all these Parts up into it ; so that altho' it appears clear, yet it is loaden with this baneful Matter, and makes sorry Nourishment. If Necessity drives us to such Liquor, we must try to filter it thro' Cap-
Paper

Paper or Pumice Stones very often, or we should manage it as our Sailors do the *Thames* Water at Sea, namely, let it stand in Casks till it smells, and settles, and grows sweet again, for thus it loses all its heavy and unweildy Parts ; or lastly, it should be boil'd, and suffer'd to stand till it throws down its gross Sediment : How is it possible for such Water-drinkers to avoid a gross Blood, and all its Attendants of Laziness and Dulness ?

A Country where Northern and Easterly Winds blow often, and where it is surrounded with Seas, must be cold and moist ; we have no Sun Beams from the North, and we can't but have Water from the East ; if the Cold locks up the Salts in the Air, the Water will dissolve them, and therefore the North-East Winds are cold and moist : Fevers are frequent in such Weather, as are also Fluxes. The delicate and nice Folks keep warm and shun harm, so that the Necessitous, and People of Business, only suffer upon such Changes of Weather : Mankind had need to be plated over to bear this Weather ; there is no Fence against it besides cold Bathing, warm Cloathing, or generous Liquor ; the first were an universal Guard against them, if the Lungs could be fortify'd ; and the two latter are good Helps to ward them ; but they whose Lungs are tender, and subject to Defluxions, have no other Guard than sitting warm.

The most pleasant, as well as the most wholesome Place to live in, is, where neither Heat nor Cold exceed, where there are fine Fountains, a River, and gentle Showers. For all is here temperate, and all is in a perpetual Flux of Variety ; such a Place must be fruitful and wholesome, pleasant and healthful, where Woods, Fields, Hillocks, Fountains, Hedges, and Rivers are checquer'd : Such a Country gives Pleasure to the Eye, Profit and Health to the Inhabitants ; and if the Soil be chalky and rich above, you have all the Pleasure and Health, that can be wish'd for.

When Seasons are at their Height, then it is most unwholesome ; hence the Summer and Winter Solstices ought to be the most unhealthful Times of the Year : If Heat and Cold were always most intense, when they should, by the natural Order of Things, these two Seasons would certainly prove very fatal : But Numbers of Accidents in our Island concur to change this Order ; so that we are not in the hottest Season, whilst the Sun is in *Cancer*, nor yet in the coldest, when the Sun is in *Capricorn*, and therefore it is, that Sickness does not so certainly follow these Seasons ; however, when we have a Summer hot, as the Sun advances, or a Winter cold, in Proportion to the Sun's Recess, Diseases do surely afflict us severely enough : The Year 1727. gives Testimony how Diseases prevailed upon and after the Heats. There are Countries steadily affected at certain Seasons, and this

has

has given Rise to our Apprehensions of the Dog Star's Influence over us, which is a groundless Panick in *England*, where all is temperate, for the most Part, and no Danger ensues from it : So much has this prevail'd, that few care to bleed, take Physick, or take Care of their Health at this Time ; Folly and Superstition guide the larger Part of Mankind.

A dry warm Season is good for phlegmatick People, but does harm to cholerick Constitutions ; wherefore most Women and fat Folks bear such a Season with Ease and Benefit ; but lean and brown Persons, and who are heated on small Occasions, suffer by such a Season ; for the Water is call'd off from their bilious Blood, and the Salts and gross Parts are exalted : hence so many Fevers, both acute and chronical, hence dry Inflammations of the Eyes, and hence Lownesses of Spirits : They who have had any Practice, the Year preceding this, will bear me witness, how much Truth there is in this Assertion, where so many low-spirited Fevers have rag'd, and have left Inflammations behind them, if ill manag'd.

A warm and open Winter, that is without Frost, and a cold, dry Spring, seldom fail of bringing on Diseases in Summer, if it be hot ; Diseases are sown this Year, and their Crop is reap'd the next ; observe how Nature and Custom tally with one another ; as no Man becomes suddenly wicked, so Diseases are bred long before they appear : The Inhabitants

ants of *England* are season'd for the Variations of Weather; our Blood and Humours are chain'd in Winter, and let loose in Summer; that is, the Cold in Winter has not only the Force of strait'ning our Vessels, but it also has an Effect upon our Fluids, and retards their Motion; but in Summer, the Heat hastens the Blood forwards, rarifies it, and braces our Vessels, and makes them elastick: But if this Order is not kept, then we breed Diseases: To check our Perspiration at a Time when the Sun has no Power, is a Consequence that naturally follows from the slow Motion of the Blood produc'd by this Cause; for Bodies, whose intestine Motion is check'd, throw off very few Steams; but as the Sun advances towards us in the Spring, it renews the Warmth of our Juices, as well as of all Nature, and increases the Perspiration of our Skin; if therefore at such a Season, a cold and dry Air should blow, it will check and tye up those Steams, which the Sun's Heat should naturally draw out from us; and the more Force the Cold has upon us, the more sickly will be the Summer following: Coughs and Fluxes at least will follow, if not Fevers themselves; what should have taken Flight by the Pores of the Skin, runs into the weakest Parts, that is, the Lungs or Intestines: If the Summer should be moist and warm, it is odds but malignant Fevers become epidemical. Take the whole Context, and it will stand thus; Your Pores, after being open for a longer

longer Space of Time than usual, are suddenly clos'd up, and a Season, always remarkable for introducing malignant Fevers, succeeds this Situation of Affairs : What must we not fear under a double Cause of such Efficacy in generating Diseases ?

A wet and warm Spring, after a moist Autumn and a moderate Winter, is wholsome ; the Damage receiv'd, in Autumn, by the Moisture, is gradually repair'd by the Perspiration's flying off the Winter following with an equal Continuance ; so that the Moisture of the Spring, being call'd off next Summer, leaves little or no ill Effects within us, which certainly would happen, were the Summer to continue hot and moist.

Snow and Ice melted into Water are unwholsome Liquors to drink ; I know some commend such Water as the purest and most natural ; but there is a Pertness even in Water itself, which renders it agreeable ; and this pert and agreeable Taste is lost, in Water, by boiling, long keeping, or thawing ; compare the one with the other, and it will be acknowledged by all that have any distinguishing Taste. Perhaps it is not easy to account, why so simple a Body as Water should be so different from itself, having no Spirit to lose : but I am of another Opinion ; you may feel a sensible Difference or Taste in Water from the Fountain and from a Pail which has been carried from the Fountain about four or five Minutes before. If Ice itself is in Motion,
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and loses Weight by being kept, we may allow Water unlock'd up to have more Motion, and to lose its fine Parts : As we find Salt to reside in all Water, probably it is the fine and most volatile Spirit of this Mineral that flies off; and what confirms this Opinion is, the Appetite that Water just drawn up from the *Well* gives to those, that drink moderately of it. Since the Sea is the Source of all our Fountains, and as it is more or less saltish, as it approaches to, or recedes from the Equinoctial, the Fountains nearer to it must be more impregnated with this Spirit, and those at a greater Distance must be less, which seems to be a Stroke of Providence, in supplying those with more Spirit, where the Heats destroy their Appetite most; and I shall add, that as Cold hinders these and Spirits from flying off in other Cases, so in Winter Water has more of the Spirit in it, being detain'd by the Cold. The Drinkers of Snow-Water are troubled with swell'd Throats, and the Poet says of the Inhabitants of the *Alps*, who drink Snow melted for their common Liquor, *Who wonders at swell'd Throats in the Alps?* They breed phlegmatick Disorders and Obstructions every where, and if ever we come to give such People Physick, they generally require stronger Doses; they are subject to Bloatings all over them: for we see Sailors from *Greenland* that are oblig'd to thaw the Liquors they drink, become dropical all over: They bring on Inflammations, if warm

Weather

Weather succeeds the Drinking them ; they give Ruptures, Varixes, Ulcers, and wither the Drinkers of them ; in short, such Waters are capable of producing all Kinds of Distempers. It behoves *Water-Drinkers* to be very inquisitive what their Water is made up of ; because we meet with Stone in petrefying Waters, with Sulphur in stinking Waters, with Salt-peter and Vitriols of every Kind, and even with Arsenick and other Poysons embodied with them : Where these Ingredients are dissolv'd in them in large Quantities, the Drinking gives us immediate Notice, and alarms us in Time ; but it very often happens, that a small Quantity of a poisonous Mineral is blended with our Waters, and as this gives us but slow Notice, we are hurried into Distempers before we are aware. The *Natural History of England* is yet wanting in this Particular, and 'tis amazing to me, that Physicians don't seriously set about the Work : If such Ingredients are contain'd, and we are oblig'd by our Condition of Health to drink Water, it is our Business to know which Water to chuse for our Purpose, and who can inform us better than our Physician who advises it ? And by what distinguishing Marks does he steer, who takes up with the Word of no Judge, that is, of the Vulgar ? Thus is one of the greatest Concerns of Life made no one's Business, and is to be decided by such as know nothing of the Matter under Dispute : The Question is, Whether any hurtful Ingredient be contain'd

contain'd in the Water they ordinarily drink ? Now who can answer this Doubt ? The Valetudinarian is oblig'd to live upon it as his common Drink, because they in perfect Health, and of a robust Constitution, don't feel the ill Effects of its hidden Ingredients : Lo, the Ebb Physick is reduc'd to ! Strong and healthful People bear small Quantities of Poison itself, and are able to throw it off by Exercise, and by a thousand of different Methods ; besides, their Fibres are not prejudic'd by small Errors, tho' accumulative ; whereas sickly Persons are sensible of the least disagreeable Particle in their Liquors. A Glass of Wine is a Cordial to a Man in Health ; but if you oblige a sickly Man to swallow down that Quantity, you are in Danger of throwing him into a Fever, or ten to one he throws it up again. If your Water springs up among Rocks, it is more than probable that there are Mines of Copper, Lead, or Tin, under them ; and if Springs partake of these Minerals, they won't fail of being unhealthful ; or, however, it is certain if they run under Ground among Stones, they will partake of the stony Particles, and will infallibly produce the Stone and Gravel, and serve as Plaister to the Guts. Rain Water itself, which is suppos'd to contain no corrosive Salts, will, by dropping often, hollow a Stone ; and Water running with such Force under Ground, as to pass a Gallon or two in an Hour, cannot fail of snatching up a great deal of stony Matter from
from

Matter from Rocks, which, by its Smallness, swims in the Water, and being often drank of, cannot fail of doing harm; and if in such Towns or Villages we meet with Complaints of Suppressions of Water, and Costiveness, the Reason is at Hand, their Waters are stony; white Wines are the best Correctives that such Inhabitants can take.

Salt Springs are very unwholesome, unless we take now and then a Draught to cure our Costiveness; or unless you are fat and troubled with Indigestions of a Phlegmatick Kind, they send off all Crudities of that Sort, or divide the viscous Matter in the Stomach, and render it fit to pass into the Blood; but when we have done this Part, we must hold our Hands, and fall to our ordinary Diet and Exercise for preventing the like Disorder. I must observe one Thing for the Benefit of Sailors; and it is this, they are us'd to Salt-Meat for whole Voyages of a Year's Length, and must from thence become very Costive, and often want a Remedy from the Doctor's Chest, which they have enough of without him; for they need only drink two or three Draughts of the Sea Water, which the nearer the Line, the stronger it is, and this will set them free at Pleasure; but you will object to me, How happens it, that Costiveness shou'd arise from a Diet of Salt-Meats, and yet a Draught or two of Salt-Water will be a Remedy? To this I answer, That it is true

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that Salt makes our Joints stiff, and this is the Cause of our Salt-Victuals with the Sailors, their Bowels become stiff, and the Victuals therefore can't conquer that Stiffness; and therefore they stop in the Guts, till a sufficient Weight of them out-balances that Stiffness. *Baglivi* made us sensible of this, by steeping Fibres in various Liquors; and I think we plainly perceive it ourselves when we eat salted or hung Meats, that the Strings and Threads of the Flesh are harder to bite asunder, than when they are fresh: This being granted against myself, I solve the Question propos'd in the following manner: Salt-Water taken out of the Sea is not pure Salt, but has a good deal of Sulphureous Parts in it beside the Water; the Smell of the Sea convinces us of this; and therefore as the Salt stimulates, the Sulphurs relax and open the Belly: This very Water is good for Young Sailors or Travellers that are Sea-Sick, for if they daily take a sufficient Quantity of it, so as to keep them open, it prevents their Sea-Sickness. That Water is the wholesomest to drink, which has the least of any foreign Matter in it, or which will keep the longest without growing musty: But if we quarrel with all other Water, our Sailors wou'd never carry *Thames-Water* to Sea with them; which upon keeping will not only smell, but burn also as a lighted Match: This Water smells and works, and after Fermentation throws down a Sediment, which done, it grows sweet again.

must confess Necessity only can make Men
rink such Liquor, and surely a Method
might be found out to make Salt-Water full
agreeable, if not more, and yet at a small
charge, and then might our Merchants save
themselves Expence and their Mens Lives: I
shall only observe in general, that Salt-Water
made fresh by three different Methods, the
further mention of which I shall pass over at
present. *Rain-Water* is the least incumbered
with any exotick or dangerous Particles of all
other; for such a Heat as the Sun communi-
cates, will not exhale any poisonous Parts from
the Earth; and therefore they who have no
other Water, and I know they have no other
Antigua, pass their Time tolerably enough,
they have sufficiently of that: The Fresh-
water coming down from the Clouds hinders
that which is lodg'd in the Cistern from smell-
ing too offensively, and Rain-Water is not so apt
to smell as common Water; so that generally
speaking, it is in a good Condition for drinking.
One Thing ought to be observ'd, that the Ci-
sterns must be of Stone, because Copper or Lead
will give out some disagreeable Parts to the
water, and become nauseous as well as hurt-
ful to the Drinkers: I am not so much at
liberty to shew how this happens, but Wa-
ter distill'd from a Copper-Still will vomit,
and from Lead gives the Colick and Short-
ness of Breath; and it will be useful to guard
such Water from the Sun-Beams, lest they

heat it; the deeper the Cistern is, the better will it preserve the Water, and the cooler drinks: Care shou'd also be taken to keep clean by having a Drain for it; wherefore two or three Cisterns are convenient to be built adjacent to each other: It is true, this Water wants that Spirit which is in Fountain-Water, but then as the Sun exhales nothing but Water from the Earth, it is free from all Filth and Salts; and Lake-Water, Running-Water or Water from the Sea exhal'd, are equally good and wholesome for the Uses of Life.

If Waters have a Sweetness in them, and we are told some have, they then dissolve some Oils and Salts of the Earth into their Composition, and become agreeable to the Stomach by being smooth, and they in some degree are obtunding, and such Waters must be wholesome where there is an Acidity too pungent to the Stomach, or where Leanness is a Consequence of these Salts; for Salts that twinge the Excretory Ducts of the Skin and Kidneys, seldom fail of carrying off large Quantities of our Humours, and as our Supplies are not in Proportion to what is carry'd out of the Vessels, we must grow lean: But then it is observ'd, that all Waters putrify in Proportion to the Number of Parts they contain of other Principles which Chymists call *Active*, because they being always in Motion, they are rubb'd into a Putrefaction. Common Sense teaches us to avoid Stagnant Waters, they are stuffed with all Mixtures of Principles, and even

ven bear the small Eggs of Animals up in their
Mafs, and what ill Confequences may we not
ear from thence? from fuch Waters Worms
re bred: As I believe all the World are averfe
o fuch a Liquor, I need not be at much
ains to decry it.

If we have Choice of Living where we
will, and we confult our Health in this Choice,
advife to chufe fuch a Situation as is expos'd
o the Riling Sun, becaufe a Genial Heat calls
ff all the Vapours and Fogs early in a Morn-
g, fo that at the Time you are to rife, there
a clear Air, and the Plants breath out their
ragrant and wholefome Odors to refresh you;
whereas were you expos'd to a Mid-Day Sun,
he Heat wou'd draw up too many Mifts about
ou, and you wou'd be furrounded with them
or above one half of the Day, and lofe the
leafure of Life; or if your Seat fhould be
pen to the North Winds, you wou'd be chill'd,
nd your Perfpiration wou'd always be in dan-
er of being choak'd up, and you wou'd then
e perpetually Coughing and Wheezing: If
ou are expos'd to the Western Winds which
afs over an Ocean, then you have Rains in
oundance, and Moisture over-runs the Country,
nd all the Inconveniencies attending it, as
evers, Agues, Coughs, and fuch like; and
your Seat be near the Sea, the Air is Cold
nd Moist, and blights your Trees and enters
to the Bottom of your Glands, and makes
em too narrow for Perfpiration, fo that fuch

must of course make large Quantities of Water, or become unhealthful. In fine, what may be said of Seasons may be declar'd of the Situations of Seats; so that if any Place is expos'd to the Rigor of Winter, the Inhabitants must be Phlegmatick and subject to Catarrhs and Defluxions every where; because their Pores are liable to be stop't up by the Cold, and if the Humours don't seize the Lungs, they at least will pass downwards; and it is observable, that if a Costive Person walks across a cold Pavement, it generally gives him a Stool: Whether the Cold stimulates all the Fibres, or also by stopping the Perspiration in the Feet, it must affect some internal Part, it is not worth our Enquiry, so long as Fact often confirms our Assertion: Thus are Fevers produc'd, and sometimes Diarrhæa's or Fluxes, Asthma's, Convulsions, Plurifies, and frequently Palsies: This is a Situation, where Physicians may thrive in their Profession, because here they will often have occasion to exert their Skill: The Perspiration being the most considerable Discharge in human Bodies, it being so often in danger of being choak'd, must give Being to Diseases of various Kinds. If, on the other Hand, any Seat is expos'd to the hot Sun, sharp and acute Diseases are bred. A Seat expos'd to the Sun and Winds, that has plenty of Water, will generally be healthful, because Variety becomes usual, and nothing affects such hardy People.

We should eat plentifully in Winter, and drink sparingly of small Things ; small Liquors fill our Veins with Water, and make us subject to Dropsies, Coughs, Defluxions, and Pains at Stomach ; even tho' they should be taken warm down ; for nothing can give other Nourishment than it contains ; and our Blood, by the Cold, is fill'd with a Superfluity of Water, because it stops up our Pores, and causes a Retention of Fluids : What then will follow from swilling small Liquors, but Diseases from Water ? Wine it self, if we revel in it, does the same, and causes Dropsies, by a contrary Reason ; for it makes the Juices heavier and thicker, and they stick at every Valve and Gland, and break ; from which Breach the thinnest Part ouzes out into the Cavities, in the Shape of Water, but very corrosive ; and these Dropsies are attended with red Water in small Quantities, and Thirst ; whereas the others are usher'd in with pale Water, and little or no Thirst. Our Stomachs are generally more eager in Winter, and digest better, and therefore we may eat freely ; because it both suits our Appetites and our Digestion. However, it is necessary for Mankind to be guided in the Quantity they eat and drink, and therefore permit me to give some general Caution about that Particular, which must be varied according to each one's Temperament and Bearing. I say, first, we must never fill our Stomachs so as to be oblig'd to unbutton or unlace ; because too

much can never be all press'd into Nourishment. Secondly, We must drink no more than will moisten the Victuals well, because too much Liquor hinders the Walls of the Stomach from grinding, as we may call it, the Meat small enough. It is wonderful to see how Instinct has taught Birds to devour Stones, for the more effectual grinding their Grain into a soft Substance, and these Pebbles we often find in their Gizzards : The Bones of Animals serve Dogs for the same Purpose, for their Appetites are voracious, and a Bone ter his Meal is his Defence and his Choice ; when they are ground, they tear his Victuals into Atoms, and he digests of Course ; for the whole Aim of Digestion is to tear the Victuals into small Morfels, and to extract its Juices, that by Circulation it may be brought into a like Substance with our Blood ; and whatever hinders these Ends and Purposes, must be a Prejudice to us : But they are cross'd by too much of either Eatables or Drinkables, because if Digestion in its perfect Heighth depends on the Walls of the Stomach touching every Part of the Victuals, and pressing its Juices out, so as to make an Emulsion or Chyle of it ; then by how much it fails of this, the Digestion must be incomplete and imperfect, and more passes into the Jakes than into the Blood, and great Eaters therefore are generally lean. The Winter is a Season that makes our Fibres more elastick and stronger, and therefore is our Digestion better,

better, and more quickly perform'd in Winter. Were the Seasons constant, it were possible to determine what kind of Diet would suit best at certain Seasons. However, in general, as the Heat prevails, we must dilute more, and eat less, especially of hard and stringy Meats, unless we are in love with Fevers and Drought. Wherefore, in such a Season, we ought to dilute with Wine and Water, or small Beer, moderately strong; for, whatever is too spirituous, swells our Blood into a Fury, and our Passions suit our Humours. If Cold prevails, we must avoid certain Diets call'd windy; that is, we must avoid cold Roots and Herbs, because the Proportion of essential Salt they abound with, raises an intestine Motion in the constituent Parts of the Plant, which is attended with Wind; but then this Salt not thoroughly dissolving the great Quantity of crude Oil in these Plants, the Mass of Victuals is like Dough heav'd up, and turns, in many Places, into Bubbles, that is, Wind, while the greatest Part cannot be thoroughly leaven'd; and a great Motion is requisite to turn such a Mass into a Liquor. For, as *Hippocrates* observes, Viscids become large from a small Bulk; that is, they are windy, because they rarefy; that is, the same Matter takes up more Room than it did before, and must therefore contain much factitious Air, as Mr. *Boyle* calls it, or Wind in them. When therefore they are thus rarefied, they distend the Stomach, and give Colicks: Such
a Diet

a Diet is not therefore to be ventur'd upon, but when our Humours are in a Hurry, and we neither sleep, nor keep any thing upon our Stomachs, but we vomit it up. In warm Weather we must study to hinder too expensive a Perspiration, and then comes in play all cooling and slimy Nourishment; such as raw and cooling Salads of Lettice, Lamb's Lettice, Sorrel, Mercury, all the Pea-Tribe, and such smooth Diet; Fruits of all kinds, Melons, Cucumbers, Cherries, Peaches, Plumbs, Apples; Pears, Currans, Apricots, Nectarines, Grapes, and the like; for these take up some longer Space of Time to be digested into subtil Parts, and into Sub-divisions of Parts, and therefore they prevent our being heated and thrown into the Diseases of that Season, that is, Fevers. But whilst I advise the Use of these Things, I would not be misunderstood; I say then, a moderate Use of them serves to curb our fermenting Juices, and keep them from exorbitant Heats; but if we use them indiscreetly, they will have the following Consequences: The Blood being too much fill'd with such Nourishment, will have the same Effect as if these Bodies were laid up in Heaps; that is, they ferment, grow hot and putrify, and in the Blood are carried about to all the Parts of the Body, and prick the Fibres, dissolve the Blood, and produce in the Stomach and Guts, Vomitings and Purgings; in the Blood Fevers, and in the Nerves Convulsions; and thus the whole animal

OEconomy

OEconomy is disturb'd, and Nature is subverted. So that as in moral Cases, by advising a Man to be frugal, it is not meant that he should be avaritious ; in like manner, to advise the moderate Use of any thing in Diet, it cannot be imputed to an Author, that he has advis'd its Abuse. In *moist Weather* our Diet ought to be dry ; for drinking, especially weak Liquors, heaps up too much Moisture, and both our Concoction and Juices will be too watry ; whereas Moisture shuts our Pores, and we retain above half of the Steams we should exhale ; to balance which, we ought to drink less. And moreover, we risque De-fluxions and Coughs ; for in moist Weather we weigh heavier, and this we are sensible of by complaining of a Drowsiness in such a Season : This Complaint then is but a Consequence of our Pores being stopt, and is an Argument of our Weight increas'd.

Feeling Cold is a Sign of Weakness : It is usual with weak Persons to feel every Alteration of Weather ; their Fibres are too high strung, and the least Stroke of Air upon them makes them move, and shiver. Such People are as impatient of Heat, as they are incapable of bearing Cold ; the true Reason of which Appearances is seated in their Fibres, and there is a short and easy Method to harden such tender Constitutions ; they need only to bathe in cold Water, and their Tenderness disappears ; but then they ought to advise with proper Persons before they attempt Bathing.

This

This is generally the Condition of the Gentry, and of such as indulge themselves in all the Softnesses their high and opulent Circumstances can afford them. They eat the tenderest and sweetest Diet; they lie in Down, and cover themselves warm, and relax their Fibres by forcing Discharges by the Skin, and then wonder how they come to be so tender, that they can't peep out for Colds. It must be as great a Discretion if the Sages in Physick forbear smiling, when their Patients, under the abovemention'd Indulgences, ask them how they come to be so subject to Defluxions and Rheums; as if a Man who had drank plentifully of spirituous Liquors should wonder how he came to be drunk. They who make use of the Means, must wait for the Effects to follow of Course.

Plump People, and such as are fat, are phlegmatick, and they ought to forbear Excess of Liquors of any kind; for there is a Degree of Fatness Nature will not bear. As soon as we are arriv'd at this Point, our Vessels crack, our Humours corrupt, and Dropsies ensue. Liquors fill our Vessels suddenly, and we go on in a Course of filling them, when we should study how to empty them. It is only allowable for thin and dry Constitutions to moisten their Clay; we then see the Reason why old Men naturally love their Glasse to a Pitch of Mirth; they may be allow'd to comfort themselves, because their Spirits are upon the Decay, and Liquors nourish soonest, wherefore

fore wither'd Constitutions should drink moderately of strong and spirituous Wines.

Exercise is a Remedy for Corpulency ; I have known unweildy Men become of Size by making a Business of Exercise ; and I don't confine my self to any sort of it ; let them chuse that which best agrees, but let them be assiduous and steady when they begin, 'till they have gain'd their Point : Chafing is a small Inconvenience : They will soon get over that Trouble ; their Thighs will shrink in Bulk, and give them more Room to shuffle forwards every Day, if they chuse Walking ; and if they like Riding, Plaisters of Minium or red Lead will defend them. A Load of Flesh and Fat can hardly be bore by Youth ; but when Age creeps on, and we keep the same Load as in our Youth, nothing can be expected but perpetual Confinement ; get rid therefore of your Corpulency in your Youth, if you design to lead your Life with any Comfort in Years : For if you have not half the Spirits in Years that you had in Youth, you carry double the Load ; and, to increase your Burden when you should lay it down, is growing in Folly as you grow older. If Fasting and Exercise be a Remedy for Corpulency, and a nourishing Diet and Ease be agreeable to Age, you have two Diseases upon you ; if you part with one, you must part with your Life. You see then how lean People must grow fat ; for Ease and feeding moderately, that is, as much as they can digest, is the ready way to look well.

well. Indolence contributes much to this End ; nothing wastes us more than Cares and hard Study. The Vulgar know not the Effects of Study ; they think all is well with a Man when he eats, drinks, and sleeps well, and wonder to see Students look pale and wan ; but nothing is more certain than that a Chain of Thoughts, anxiously pursu'd, will waste us more in a Day than many good Meals will compensate.

person
Health
College
If you would preserve Health a long time, in this Climate of ours, you ought to take Physick or a Vomit whenever you find your Stomach loaden ; and that is easily discover'd, because you will find a Fulness at Stomach, or you will be more costive than usual. In the first Case, take a little Green Tea, infuse it in warm Water, and drink plentifully of it, till all the Slime be got off your Stomach. There is this Conveniency in such an easy Remedy, that as soon as you leave off drinking, you cease to vomit ; and in the other Case, if you go more sparingly to stool than usual, or not so often as you ought, then will you be troubled with Colicks ; and, to avoid this, as also to assist Nature in her Duty, you may take one Ounce or two of the Tincture of *Hiera Picra*, which I look upon to be the best and easiest, as well as the gentlest Physick that can be taken, for it is an agreeable Bitter, and never gripes. This Method takes off all Fulness of Humours, and prevents a great many Disorders ; in particular, if by
irregular

irregular living you have Reason to suspect a Gout, nothing provides better against it than this Tincture ; and they who are troubled with Fits of it, may, now and then, make free with a little of it before a Fit, or after one ; for it either prevents its Violence, or carries off the Dregs of one. But in this Case, I strictly advise those who take this Tincture before a Fit, that they also take a little Glass of Snakewood Root Wine once or twice a Day, to carry the Gout down to its usual Station. If you have Distempers that affect the Head at certain Seasons, or upon the Changes of Weather, this Tincture of *Hiera Picra* is a sovereign Preservative. And if you have any Pains that are troublesome to the Legs, as scorbutick People experience, the gentle Vomit abovementioned ought to be repeated monthly ; some in costive Constitutions use new Ale with Advantage. I knew an old Physician who never car'd for other Ale than what he drank from the Vat, for this Reason.

The Diet of lean People, and of the Corpulent, should not be the same ; for we can't make lean People fat with salt Meats, nor the corpulent lean with Milks, Creams, and Jellies. If the lean are to be made fat, they must feed with smooth Diet, such as Almonds, Millet Puddings, sweet Milks, Jellies, Creams, smooth Ale, Sack, Chocolate, Rice, and such like ; to use little Exercise, sleep much, and avoid Cares. And if you want to make a Man lean, feed him with little, and give him salt
Meats

Meats and four Wines ; let him exercise stoutly, study hard, or give him Troubles for his Portion ; let him go late to Bed, and rise early, and you may make a Scare-Crow of him at Pleasure. Here the Ladies, who study Shapes, may see how to preserve them ; but, I fear, few will care to purchase them at this Rate.

If your Constitution is such as to be too loose in the Belly, you ought to avoid Variety of Meats and Drinks, and you should eat seldom, and drink Claret and Water instead of small Beer ; for all Malt Liquors must be shunn'd in such a Condition. Your Victuals should be as little varied as possible ; eat but one sort, and that roasted hard. I must here remark upon a certain Nation, who are very subject to be costive, and yet live upon Meat roasted or boil'd to Rags. What can be expected from hence, but Hypochondriack Disorders, but Vapours and Melancholy ? and yet they live on after the same Manner, without having any to advise them to the contrary. If they set up their Liking above their Health, we may spare our Labour. If they consult Reason for their Guide, where the Sun and dry Winds make them naturally Costive, they ought to oppose this Indisposition by a relaxing Diet. I suppose my Readers will easily conceive I speak of the *French*, who are subject to be bound, and yet they over-roast or over-boil their Victuals, which can't fail of making them more so. What I say of them may be applied

applied to all costive Constitutions whatever ;
or Diet must be oppos'd to our sickly Consti-
tutions: Therefore a hot Diet must be given to
phlegmatick Persons ; a cool one to chole-
rick and warm Bloods ; and for this Reason a
loosening Diet must be made use of by the
Costive, and a binding Diet to such as are apt,
upon all Occasions, to be loose. If you eat
salads, let them be of Mint, Cresses, Horse-
Radish, and such warm Things ; and in this
some Caution is to be us'd, because a small
quantity of warm Roots or Leaves comforts a
stomach so relax'd as to let all go it embraces ;
but any little Excess has a contrary Effect,
and contributes towards the Disorder. This
may seem a Paradox, and therefore I shall put
you right in the Affair. A small Quantity
raises up the nervous Coats of our Stomach
and Guts ; but a larger is too biting, and gives
much Throws to the whole Channel of the
bowels, that it hastens on Stools. If then you
can't hit upon a *Medium*, it were better you
never meddled with these Salads, than plea-
se your self with what will be hurtful.
Keep to a simple Diet, and to one Dish, hard
one, and honest *French* or *Portugal* Claret,
and you will find an agreeable Change, as a
recompence of your Self-Denial. It would
make a Man smile to hear Persons of Distin-
ction complaining of this Case to their Physi-
cians, and yet are rather willing to be at Ex-
pence, and the Trouble of taking Slops, than
confining themselves to a moderate Life.

In taking Phyſick or Vomits, it is a Queſtion how often they may be repeated, or whether it were not better to repeat one Doſe after another immediately. I ſhall diſcuſs this Point in as few Words as the Nature of the Queſtion will bear. If any one has occaſion for a Purge, and if it works gently, without raiſing any Uneaſineſs at your Stomach ; ſuch as ſwelling and puffing up, or any Heat in your Blood, and ſo makes your Hands and Feet burn, and cauſes Thirſt : I ſay, if it has not theſe Effects, all is well, and you need not repeat the Doſe till you ſee whether it has had the deſir'd Effect ; if not, repeat it at ſuch a Diſtance of Time as may be convenient to carry off the Complaint you want to redreſs ; ſuch I will ſuppoſe to be a Fulneſs at your Stomach, and a Pain of your Head from thence ; but if the aforeſaid Conſequences follow, then it is injudicious to do more harm. The Miſtake muſt be wip'd off as ſoon as poſſible, by taking a Dram of Diaſcordium in any ſimple Water ; ſuch as that of Mint mix'd with Cinamon Water, at Bed-time. This will allay all Complaints uſual, upon miſtaking Phyſick. And, in like Manner, when for ſtated Reaſons you have taken a Vomit that works well, you muſt expect to be uneaſy after it ; but if you be very uneaſy, that is, if your Stomach and Belly be ſore, if it be hard and ſwell'd, and your Reſt is diſturb'd, it is better to ſtudy Quiet, and take ſome cordial Opiate to recruit your Spirits, and quell all the Uneaſineſſe

finesses rais'd. I think such sort of Constitutions ought to forbear Vomits of any kind; or however, if their Case requires them, let them be recurr'd to as seldom as may be: For others, who are oblig'd to take Vomits, and they find a little Ease by them, but are not quite recover'd, give them another as soon as they can bear it; for one Vomit, in Cases of the Stomach, where they are requir'd, does more Service than ten Purges. Phlegm often lodges on the Coats of the Stomach, nay, in the Interstices of its membranous Fibres, where it soaks in, and the Shock the Stomach suffers by a Vomit, cannot fail of squeezing out all this Matter out of it, and then it is brought to a good Tone, proper for digesting our Victuals, by some good Bitters.

Our Children in *England* are mostly carry'd off by Gripes and Convulsions; and to provide against these Maladies, would be saving the Lives of two Thirds of those who die. I know not how it happens, that our Women indulge themselves in all cool and windy Diet, when they are with Child; but under the affected Notion of longing for all they like, they devour vast Quantities of Fruits; Melons, Cucumbers, Peaches, Nectarines, Plumbs, Apricots, Cherries, Gooseberries, Currans, Filberts, and the rest, are thrown gradually down. Consult our Fruit-Gardens, and then see what Quantities are rear'd and devour'd. This indiscreet Liberty sometimes they suffer for themselves. But if it agrees well with

D 2

them,

them, it seldom fails of making strong Impressions on the poor Infants in their Womb, whose Fibres are tender, and susceptible of every Mistake their Mothers commit. We often find them blame Frights and Troubles for their Childrens Ailments, which ought more justly to be laid upon other Causes. This we are sure of, that this Diet abounds with all that is requisite to create Wind, and raise Convulsions; because they have all a Sourness or Viscosity, or both of them. Fruits make Wines, and will ferment readily, and all that is fermented is windy, more or less. Such Aliment in Children can't fail of griping. Their Blood is made up of the Quintessence of this Diet. Their Secretions smell sour, and their Stools are as green as Grass. Their nervous Juices must be of the same Nature, and it is not possible to avoid either the one or the other, or both; for Gripes commonly end in Convulsions. I would begin at the Women, and advise them to be cautious of their Diet, if they desire a sound or long-liv'd Progeny; but if that can't be granted, then a second Chance must be run. The Children must be kindly treated from their Birth; you must carefully void the *Meconium* of their Guts, by giving them Oil of Almonds and Syrup of Roses join'd to a little Oil of Nutmegs gradually, till they have thrown downwards that black, pitchy Stuff, that has lain in their Bowels for so many Months. As soon as you perceive that all this is pass'd off by Stool,

Stool, which you will know by the Colour being chang'd from a black or gritty Matter, to a yellow or brown ; then in their Diet or Spoon-Meat, if you bring them up by the Hand, mix a little Drop of Spirit of Hartshorn in their whole Meal, or of good *Sal Volatile Oleosum*, which is yet better, twice or thrice a Day, and continue to do this daily for some Time, and you will, very probably, prevent both Gripes and Convulsions ; or, if this should be look'd upon to be too much Trouble for the Nurse, let the Mother give a strict Eye to their Childrens Stools ; and if they perceive in them the least Tincture of *Green*, then let them be diligent in giving these Drops, till they turn of a yellow Colour ; and this you will find a Method of great Use for the Disorders mentioned ; and as Children are fed too high, it is probable their little Stomachs may be cramm'd too much with Phlegm of a sour Nature ; and a little Dose of suitable Physick, such as the Syrup of Roses, just mention'd, with the Oil of Almonds and Nutmegs, once in a Month, will be useful. I have often known a Method made use of by Nurses, which is of a dangerous Nature. When they perceive their Children disturb their Rests by crying, they give them Doses of *Meconium*, or Syrup of white Poppies, in order to set them to sleep, and to keep them quiet. This is a very pernicious and roguish Custom, and Parents can never be too cautious about it ; if they find their Childrens Bellics swell'd ; if

D 3

they

they are coſtive and drowſy ; if they are thirſty, and loſe their Appetites, there ought to be Inquiry made how all this comes about ; and to bring Nurſes to a Confefſion, you muſt preſs that your Children may take now and then a Doſe of this Syrup, or of *Venice Treacle* ; and when they find you fall in with their Notions heartily, they are Fools enough to acknowledge, that they have always practiſed this Secret, or it would not have been poſſible to have kept the Child eaſy : Whereas an Admonition againſt it would only have ſerv'd to make them conceal their wicked Arts. It is high time to keep an Eye upon ſuch a Nurſe, if you ſet any Value upon the Child's Health or Life. Children ſuffer great Detriment from this ſoothing Secret, becauſe it agrees ſo ill with them, that one Doſe works twice as long upon them, as upon advanc'd People. A Child with one Doſe, for Example, will ſleep for twelve Hours ; whereas a Man ſleeps only for fix. If then a Nurſe plies the Infant with this Syrup, 'tis Odds but ſhe deſtroys it before the Parent diſcovers how all this happens. In Gripes and Convulſions then avoid Milk-Meats, and Victuals too much ſweeten'd ; all theſe Things turn ſour upon their Stomachs, and ever cauſe theſe Symptoms ; Broths are the beſt Diet in ſuch a Caſe ; but if Children are peeviſh, and are very thirſty ; I ſay, Milk boil'd thin, and ſuch cooling Diet is beſt ; I ſay, Milk ought to be boil'd thin and their Pap alſo. It is a horrid Miſtake to
boil

boil their Victuals so thick as to be a perfect Glue; it sticks, indeed, to their Ribs, as they say, and to every place, and their little Hearts have not Force enough to dissolve it. This is the last Scene of our Victuals in our Blood. When all the fluid Parts are carry'd off by Urine, and the Pores, the Juices become jelly'd and unfit for Circulation; and our Remedy, in such a Case, is to supply Liquor to dilute this Jelly, that it may not stick too much any where; for Nurfes then to look upon this Thickness of Childrens Victuals, as a necessary Condition to nourish them, is a vulgar Error, that ought carefully to be exploded, and put out of the Nurfes Heads. It is from hence that they are so far from gaining the End they aim at, that they starve the Child, and bring it into an Atrophy and Wasting. However, this is a Custom they will readily comply with, according to the Mothers Desires, because it saves them both Labour and Fire. At present Mothers are pleas'd if they see a Porringer of gluish Victuals, and enough of it in a Pipkin: This Caution, I hope, will prevent it for the future.

Diet for effeminate and weak Constitutions, ought to be dry and winy; their Fibres are soft and flabby, and want somewhat cordial and corroborating. Women are liable to many Disorders, from a Softness in their Fibres; their Womb is a Sink that receives all Impressions from Phlegm; their Whites are a con-

vincing Proof of their Softness, which are much hurry'd on by Births, and any Fatigue. They ought to contest with this Accident, and oppose it the Moment they are attack'd with it; it wastes them, it contributes to Barrenness; it makes their Lives irksome, and takes off their Colour and Appetites. You need only see a Woman's Face, to know if they are troubled with the Whites; for their Eyes have a leaden Circle about them; their Cheeks are pale and Earth-colour'd; they are, every now and then, clapping their Hands to their Back, which is a secret Confession, they feel somewhat troublesome there, and such Women seldom fail of having Pain in their Backs. If you sit at Table with them, you will perceive they eat little. If they don't favour themselves with Ease and Quiet; if they don't refrain from watry Liquors; if they don't eat dry Meats, and drink dry Wines, as Claret and Mountain Wines, they must expect to be sickly all their Lives. Youth is the Season for helping this loose Habit; if it gets Root by Neglect, and Years creep on, it becomes past Relief. I am not for encouraging Drams, but somewhat Cordial at convenient Seasons, gives Nature some Assistance: Steel Waters of the strongest kind may be mix'd with their Wines; a little *Bristol* Water is also of Use in this Case, because either of these Waters are corroborating, and straighten the Glands of the Womb, and their Fibres every where, so that less will flow from them.

Exercise is not proper for such as have Stools upon it: I have known several, that have been under these Circumstances; Mr. *Fuller* then in his *Medicina Gymnastica* ought to have inserted some Caution on particular Constitutions, and not have made his own a Standard for all the World: It is plain that Exercise does good to a loose Constitution, where their Guts are lin'd with a Slime that partakes of a Sourness, and therefore is it excellent where People are Splenetick and their Humours are viscidous and gross, for then Exercise thins the Humours and carries out of the Body all glutinous Matter, which gave such distemper'd Bodies Winds, Belchings, Twitchings, Faintnesses, Whimsies, Watchings, and a thousand other Symptoms; but where the Guts are too sensible of the least Shock, Exercise hastens the protrusive Motion of the Bowels, and down go the Victuals in a hurry, and you are depriv'd of Nourishment: We may add, that there is sometimes observ'd a peculiar Frame, which is a Fault in Nature, and which we can't amend by all our Art. What then, in the Name of Wonder, shou'd we be so straitlac'd in our physical Directions, as to leave no Latitude for other Constitutions, but we must tye all Mankind up to what is useful for us! I have often been diverted with Patients, that believ'd all was good for them, that they saw their Physicians eat or drink; I'm afraid my good Friend *Fuller* believ'd so too: I don't know any better Remedy for such Constitutions than Ease
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till their Meals are digested; or if their Necessities won't permit them to enjoy this Indulgence, they ought to suit their Diet, and eat or drink Victuals and Drink, that will stick to the Walls of their Bowels; that is, they shou'd feed upon Rice-Meats without Butter, upon Calves, Sheep, and Cow Feet and Heels, upon Jellies, avoid Flummery, Butter, Cream, and Veal, drink Claret, but avoid Sack: By such means you may in Time overcome this slippery Condition, and have a Chance of growing fresh-colour'd and plump: It is better to act in this manner, than to starve for Exercise; that is, it is more convenient to act thus than be oblig'd to eat little, and sit still; the Pleasure of the animal Part of us is to feed well, and move about: The Desire of gratifying our Craving, and of seeing Shows, is implanted in Mankind.

If you digest your Victuals badly, as will be known by Belchings and swelling at Stomach, you ought to eat less and seldomer; you ought to exercise moderately, and sleep more: There are great Disputes among Physicians concerning the Effects of Sleep on the digestive Faculty; it is certain a quiet Sleep promotes the exhaling our Steams thro' the Pores of the Skin, and Flatulency is the most ærial, or, if you please, ætherial Matter in the Body; then our Humours upon the last Division are all Air or may be resolv'd into very fine and invisible Parts; the Pressure of our Stomach is weak, if the Victuals be half dissolved

folv'd only, and then it is we complain of Wind; the Chyle is thick and spirituous, that is, it has a good deal of Air wrapt up in Slime, which for want of a thinner Consistence is retain'd, and swells us up, and makes us unable to bear any Straitness from our Cloaths. Sleep under a warm Cover affords the Heart a fair Opportunity of dispersing our Nourishment to every Part, and of returning with Ease to the Heart again; this Motion being encourag'd, in the Time of Rest, those thin and subtile Parts, call'd *Wind*, escape, and our Stomachs mend upon it: But exceed not too much, because that wou'd drain our Blood of all its Air, and leave it too dense and gross: This Work is help'd forward with drinking a Glass of Wine in a proper Quantity; this helps to fortify our Spirits, strengthen our Stomachs, and throw off the airy Matter.

A thirsty Constitution shou'd forbear hard Labour as well as flesh Meat, and shou'd gratify their Thirst with Water and Wine; Labour forces off all thin Humours, and makes the remaining gluish and clammy, and Flesh becomes Jelly at last: Upon these Accounts we have nothing to do but dilute, if we will continue this Method; and all the World knows what Mankind does by putting a Stress upon Nature; this is erring for the sake of mending; it is expected that Reason shou'd get the better of our Appetites, if we wou'd aim at long Life; Children may say they act so, because they like it; but for Men of Sense so to gratify

gratify their Palates, as to have occasion for a Remedy, is trifling with their Carcasses: How can a Method of Life please such, who know that the Consequences will infallibly be a Dropsy? If Suppers after hard Labour or excessive Hunting-matches shou'd make Men thirsty, they must make large Quantities of Water, if they crave Liquors after them, or expect to have swell'd Legs and Bellies.

If you observe that Colicks attend you upon Exercise, you must forbear Eating and Exercise upon this Account, for Exercise promotes Digestion, and hastily too: if then your Stomach is so tender as not to bear a hasty Digestion, you must rest till the Victuals are gone off from your Stomach, otherwise the Victuals swell in their Dimensions, and huff you up, and both give Pains and Belchings of Wind: This is an Accident that fatigues Hypochondriacal People; their Stomachs are easily hurt, and their Humours are sharp; the Victuals in such Stomachs are always more expanded and take up more room, than in any other Constitution, and therefore let them keep easy till all is past the second Intestine at least; that is in general, they shou'd keep easy for three or four Hours after Meals: And moreover they shou'd not dilute too much, because if they do, they must expect to be puff'd up; that Liquor which will help to evaporate the Wind, and render their Victuals thinner and not glutinous, is the fittest for them; Dry, Mountain Wines are therefore the best for them, because as the in-
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ternal Vessels of such People are generally somewhat obstructed, they ought to drink such Liquor along with their Meals, as will open without filling them too much; the Quantity then must not exceed, for such Vessels are not to be open'd with stretching, because you may burst them; their Blood is pitchy, and sticks close to the Vessels, and is hard; they must be gently softned, and dissolved; Force introduces great Disturbances, and their Vessels will be inflam'd, before they will open with it: In such a case they feel swell'd, but neither Phytick, nor Glisters, nor Vomits give this Swelling any Relief; they are thrown into Hurries, and grow at last Brain-sick; nothing gives Ease to such Hypochondriack Pains and Swellings, save Bleeding in the Hemorrhoid-Veins by Leeches: I have often seen such People distracted with exquisite Pains upon Mistakes, and have as often made their Stomachs and Bowels all with gentle Discharges of Blood; because, indeed this Swelling is an Effect of the Vessels fill'd with obstructive Blood.

If Persons are troubled with Pains in their Heads, which occasion a pale Water, that is, if they are infested with Hysterical Pains, it is good by Turns to take good strong Snuff, that will help their Noses to run much; or to apply Blisters behind their Ears; if they take strong Snuff, they ought to keep at home, till its Effects are over; for Mercury taken in at the Nostrils will give Cold; this ought to be either Turbith Mineral, or White Mercury precipitate,

capitate, mix'd up with Liquorice Powder, and snuff'd up into the Nostrils; thus they will flux and carry off a great many Humours. We in *England*, are fonder of Blistring behind the Ears; but both have good Effects, and by the Discharge they make, they throw off that Redundance of Humours, that caus'd this Head-ach.

If you eat much, you must Work, or Exercise much; and if you use much Exercise, you must eat heartily. These necessarily infer one another; Exercise wastes us, and Victuals repair us; Wastes and Repairs are the Vicissitudes of Nature; and if we wou'd live in Health, we must pay the greatest Regard to these: Eating without Exercise is Cramming, and it is like sitting for the Shambles; for we must fall a Sacrifice to Excess, and die with Fat: As Exercise then without Victuals will consume you, so Victuals without Motion will fill your Veins with gross Humours.

Learn to know your Constitution; all Men know in Time what they can bear, a great many Things we like, which don't agree with us; and others, we are indifferent for, agree well enough; the same shou'd be observ'd in Physick as well as in Diet; short Necks won't bear Vomits, and Hysterical Women are injur'd by Physick, fat People rarely bear Bleeding well, and you ought to know this for your own Good, because if ever you are seiz'd with a Fit of Sickness you must give a perfect Account of this to your Physician, who will discove

discover great Things by it; many Drugs may be proper for your Disease, that will not agree with you, and if you have not observ'd this, he may do you harm without his Fault.

I have always deem'd it an Error in Patients to consult absent Physicians, and because this is a Mistake of great Consequence, it ought to be stated right, to make Consultations useful; when Patients have tried a great many Remedies in vain; they grow weary of proceeding in a Method that has not been successful, and grow uneasy under the Direction of their present Attendant, and being Wealthy and desirous of Health, desire either to remove, or have their Case stated to some eminent Physician; in doing of which they either state it themselves, or get their Apothecary, or Physician to draw out an elegant Case; whose Picture is as like the Original, as the present State is like the beginning of it; they have chang'd it from one Disease to nearly an opposite, and gather up so many odd Circumstances in so huddled a Manner, that great Judgment is requir'd to separate and join as it ought to be: If Staters of Cases wou'd do Justice to their Patients, they shou'd frankly relate, by what Accidents in Life their Patients became diseas'd; they ought to mention the Time they have been Ill; they shou'd relate the very Order they were seiz'd in, for this gives the greatest Light to a Physician, that you expect an Answer from; all the Circumstances, tho' ever so little, are to be enumerated;

merated ; and a Distinction ought to be made between the Time before they took any Remedies ; then it may be perceiv'd how Affairs stand, otherwise I am well assur'd nothing can be struck out.

Diseases never come on a sudden ; there is always some hidden Cause that has lurk'd in the Body for some time before ; it seldom happens, for Example, that Men are seiz'd with Apoplexies, without perceiving for some Time, before some Heaviness of the Head and Drowsiness ; with Inflammations in the Bowels, without Heats and darting Pains for some Time before, or with Jaundices, but first they feel a Weight and Fulness in the right Side, or Inflations in the Guts. This ought to make us heedful of ourselves, because we may often prevent Diseases by some seasonable Discharge, or alterative Remedy : I wou'd not by this seasonable and wholesome Caution, encourage whimsical and fanciful Creatures, who fancy they labour under every Disease they read, or hear of ; I advise Caution, but spurn at Scruples.

Take great care of your Healths, especially about the fortieth Year, for if you are seiz'd at that Time with any grievous Diseases, you will have much ado to escape : This is a Season, when the Fibres grow rigid and the Blood gross and hot ; Diseases must then be lasting and vigorous ; Consumptions at this Age are very dangerous, because the Humours are now extremely sharp and corrosive ; there are
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Some Parts of our Blood, which we have retain'd from our Infancy, and this must of Course be very sharp; at this Season therefore all Caution must be us'd: we must not catch Cold, we must not drink hard, we must not use too much Exercise, we must feed on smooth and soft Liquors and Victuals. This is the Age that most Men dye at, by Reason of their foregoing Extravagancies: All Men have Seasons, they can bear double the Fatigue, double the Cold, twice the Liquor, and much more of Excess at one Time, than at another; this is certain, but it is not known when we are in this Condition, and shou'd we venture a Mistake of Consequence at this Age to the forty-fifth Year, we may depend upon it, it is equal to the Hazard of our Life. The Bills of Mortality, which you may read, do testify this Truth: Youth is not so subject to Diseases, as Age, and green old Age is the most subject to them, because they have not as yet forgot their Youth, and continue to act as young Men in all their Enterprizes, which they not being able to bear, they must suffer of Course. Moderation therefore is the only Method of preserving Health, to those of this Age; what Harm do such Men not avoid, by cloathing warmer, by eating less, by drinking no more than will cheer them up, by using Exercise proportionable to what they eat, by insisting on a Diet moderately warming, by taking off a little Blood now and then, if they be hot in their Bodies, by taking a gentle
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Purge, if they are sickish at Stomach, or by fasting out too full a Meal.

The longest-liv'd People are those, who are of a moist and warm Habit of Body; Nourishment shou'd have thin and warm Parts in it; without Thinness, there wou'd be no Entrance into the fine and invisible Fibres, and without Warmth, there wou'd be no Thinness of the Humours: while therefore these two Conditions concur in one Person, they are readily nourish'd, that is, the Circulation is readily continu'd; the Heart labours to circulate too much, or too gross Blood into the Extremities; but where it is thin and warm, and not exceeding in Quantity, the Vessels are kept open, the Spirits are regularly separated in the Brain, and in a sufficient Quantity; the Heart is readily supplied and the Blood is driven on with Ease. The Endeavours of all Mankind shou'd therefore be to procure this Constitution at any Expence; and I shall take a little Pains to shew how it may be obtain'd. All Thinness is plac'd in Water, our Blood cannot be kept thin without it; Water is the least cohesive of any Liquor whatever, it gets readily into our Vessels and Fibres, and is an universal Diluter; Wine is warming and comforting, and therefore these two Liquors blended in such Proportions as will keep up our natural Heat, are very useful for the Thinness and Warmth requisite to support Life; and for the same Reason, are Broths of a good Strength necessary: I wou'd not however

have

have them turn'd into Jellies, because we retain the Heat and lose the Dilution, but such as have a thorough Taste of the Meat shou'd be often us'd; there is not a more wholesome Diet for Warmth and Thinness of the Blood, than Broths; they enter the Blood quickly, and nourish soon, but as they are soon carried off again, they ought to be often repeated. If we eat flesh Meat, it ought to be well diluted with just proportions of Wine and Water; we are to take care, that, if we exceed in either at one Meal, the next make up the Mistake; that is, if we find that we have us'd too much Wine at one Time, we must exceed the next in Water; for we cannot be to blame to measure nicely the Temperament, and to stick to what agrees. If this natural Warmth be abated by any external Accidents, such as Cold, we may for one Meal exceed in Wine or in what other Liquor will bring us up again to the former Warmth: Or we may add more Cloaths to keep up this Heat. In fine, all Arts that can dilute and heat, are useful: Thus may we keep in Health to a good old Age: I can't do better than quote the *Learned Boerhaave* on this Topick; A pure Country, mountainous Air, says he, and shady in Woods, hard Meats, the tenacious Roots and Corns, drinking of Water, great Abstinence, working at the Plough, Costiveness, Changes of Life, and of Air by Journeys, make a Body hardy, robust and long-liv'd, drive off Diseases, but they dull the Brain: He also recommends Sweats

and Salivations for preceding Diseases, but that he does inasmuch as they cure and drive off Diseases: He tells you, that the Promises of Long-Life by *Helmont's* Tree of Life, black Hellebore, Elixir Proprietatis, Tinctures, and Essences of Metals, Vegetables or Animals, are vain and deceitful. I must observe to you, that this Quotation is to be understood with Distinction; for the Air, the Diet, the Exercise, the Passions of the Mind, the Sleep of Mankind is so to be manag'd, as to contribute to make our Solids and Fluids to have an exact Poise: If our Fluids be too moveable or too sluggish, then they will bring on Fevers or Ill-Habits; and if our Solids be too strong or too weak, they will either drive all the Fluids into Air, or make a Paste of them: It is therefore convenient for those who wou'd be sure of this *Medium*, to consult every now and then, while they are seemingly in Health, their usual Physician, who out of Friendship, will not fail to advise proper Changes, and lead them by the Hand into a Healthful old Age.

Winds from the North, and blowing over a Continent, must be cold and moist for the Inhabitants of such a Country; and if this be constant, or happens for most part of the Year, they must have Diseases that retain to Retention and Moisture; therefore the Inhabitants of such a Country, depriv'd of the Benefits of a cherishing Sun, must keep warm, and cheer themselves with a chirping Bottle; they antidate these rules by Experience, for they live
jollily

jollily and chearfully, and have for some Ages, as far as History informs us : If you make Enquiry into the Annals of such Northern Countries, you will find this true ; these Precepts therefore are not design'd for the Inhabitants themselves, but for such as Necessity obliges to go and live there, that they may be appriz'd beforehand of what they have to do. These Winds blow over Hills cover'd with Ice and Snow, from whence issue Particles capable of freezing our Blood into a Solid, and which can make our Blood stand still. In proportion as we draw near to such Countries, it is reasonable for us to cloath well, make use of large Fires, and drink spirituous Liquors, or take plentifully of Volatile Spirits of Salt-Armoniack made with Lime, which no Cold can freeze, taken with Wine often : The Southerly Winds blowing constantly, or for the most Part, through a Continent, bring too much Drought, and wither the Growth of the Soil ; and the Inhabitants of such a Country are, as it were, in an Oven, choak'd with Heat and Drought ; and must of course dry us up and parch us ; for as the Ground suffers, so must the Inhabitants ; they endure Fevers of a very malignant Nature with low Pulses, as I have often heard from those who have travell'd in *Persia* ; and it appears reasonable, that their Blood should be dry'd to a Solid with the Heats, that exhale all their fluid Parts, and rob them of their Spirits : They are at least Rheumatick, and pester'd with Pains all over them, for the

Reason abovemention'd; but I speak of those who live within the Circle of the Tropicks; because beyond that Space it happens to them with Southerly Winds, as it does to us with Northerly ones; namely, they must cloath well, and live merrily in Proportion as they recede from the Sun.

If Winds pass thro' Oceans to any Part, or Country, they must necessarily bring Moisture along with them; for this Reason our Winds that set South-Weſterly in *England* bring Moisture to all Parts that lie Southerly of *Wales*, and are fifty Miles from the Sea-side; the South-Weſt Winds ſeldom fail of making this Town of *Bath* hazy and wet, as alſo *London*, and all its adjacent Towns: And as Moisture and Warmth are brought together, theſe Winds ſeldom fail of making ſickly Conſtitutions diſeaſ'd: All our Colds, and Rheums, our Fevers, our Aſthma's, our Pleuriſies are either heightened or cauſ'd by them; and they who ſuffer by the Frequency of theſe Seasons, muſt retire into a Country where theſe watery Steams are not elevated, or provide againſt them; for Example, if we ſpeak of *England*, they ought to retire into ſome Midland County beyond and North of *London*, or to ſome Country which is upon a Continent, and far from the Sea-side. The moſt common Conſequence of this Weather, is a Conſumption: it diſpoſes the Glands of the Lungs to be obſtructed, and then they become inflam'd, and run young tender Creatures into an incurable Abſceſs:

Abscess: This our Island experiences in a very particular Manner, and there is no Preventive of greater Certainty, than for Youth to be abstemious, to refrain from Debauches, to eat Milk-meats and Rice in which are boil'd Comfrey and Eringo, which smooth and open any Obstructions gently. Doubtless Moisture conveys all sorts of Salts into the Wind-pipe; for Moisture dissolves all Salts, and we, breathing in the Air, suck in all noxious Parts: These insensibly help to corrode our Lungs; and moreover young People brought out of a country, clear, and shiny Air into a smoaky Town, must suffer Damage thereby. Smoak of Coals is loaden with Acids, as appears by the Blackness of our Pewter-Vessels; turning black so much sooner in Towns, than in the Country: Testacious Medicines are much in Use in this Disposition, because they suck up into their Pores all watry and sour Juices, and obtund them; and if you be careful not to hurt your Appetite by them, nothing more beneficial can be given: In this Case our Physicians generally order their Patients to travel Southward, but why to *Naples*, or *Montpellier*, I must confess I can't tell; for *Naples* is adjoining to the Sea, and *Montpellier* is not far from it; unless the Notion be true, that the Sea-Air be good against Consumptions, because it is observ'd that Sailors seldom dye Consumptive, and particularly it is said, that if any one has got a Cough, and goes to Sea, he soon loses it. I shall examine these Things, and give you my Sentiments up-

on the Matter : Warmth and Drought serve to move the Blood forward into the Vessels, and to make the Fibres elastick ; too much of either will exhale our Blood, and make Vessels and Fibres rigid : This last Fault of the Fluids is apt to make the Blood stick to the Walls of the Solids, and the Stiffness of the Vessels will cause the Blood to stand still, which endangers an Inflammation ; therefore our Business is to promote the Circulation in a natural Manner, and to avoid external Causes that corrode. We avoid this latter by shifting into a pure Air, that is, into an Air void of Sulphurous or Salt Steams ; and how far this is the Case of *Naples*, may be evidently seen ; for it lies by the Sea-side, and the Country is stock'd with Sulphur, and a notable *Vulcano* ; and the Air of *Montpellier* is too high and light. It is reckon'd dry indeed, and warm, and is the better of the two ; but those Gentlemen, who practise Physick there, are apt to wish us home, when they find us consumptive : Their Air is then confess'd not to agree, and their Methods agree worse ; and it fare with Patients into these Countries for Change of Air, as it happens to Countrymen that have all along breath'd a free and unconfin'd Air, when they come to a large smoaky Town ; they begin to cough and wheeze : I presume it is agreed on by all Hands, that sudden Changes are always dangerous ; and if Men will hurry Patients into quick and long Journeys, and jump out of a frozen Climate into an Oven, what is this

this but a sudden Change? how will this agree with Natures unaccustom'd to such Alterations?

Nothing is more material to Health than to know the Nature of what we feed upon; and as the same Thing varied by different Proportions, acquires different Effects, it behoves us to make Remarks occasionally on all we eat and drink. *Barley* is of a cooling and viscous Nature; if then it be boil'd in Water and clean, it cools and dilutes in Fevers, it wraps up all our Salts of any Kind, and it is us'd in various Manners; if it be boil'd it is glutinous and cooling, by the first it binds, I mean if its Rind be taken off; and by the latter it retards the Circulation, for whatever is light and sticking curbs the progressive Motion: It is now in Use for a *sham Asses-milk*; half Barley-water and half Asses-milk are mix'd and drank in a Morning in consumptive Cases; and it well supplies Asses-milk where it cannot be got so plentifully, or where it is apt to curdle upon the Stomach, notwithstanding all the Means that are us'd: Ptisans are made of Barley, which the *French* are fond of for cooling; however, whatever good Properties it has, it is prejudicial to the Stomach, thro' which it passes; because it relaxes its Coats, and weakens its Walls, and Digestion is much impair'd by its too frequent Use. If it be of use to any great Sharpness of the Blood, we must for a while have patience with this Injury, and when we have got a Victory over the Sharpness, it becomes us to string

string up the Stomach again to its proper Tone, by some bitter and astringent Wine, wherefore Roman Wormwood infus'd in Red-wine, will soon repair this Damage: It is from the Weakness of the Stomach, which its Use infers, that Wind arises; Slime also besmeares the Stomach, and both are help'd by Bitters and Astringents; only if the Slime be in any Quantity, as will be known by a Load at Stomach, a gentle Vomit ought to precede the Use of these Bitters. Its Flower or fine Powder is good to make into Poultices to soften hard Tumors, and give Ease to Pains arising from Inflammations or Pains in the Side call'd Pleurifies; because as its smooth Parts are from the Oiliness of the Grain, which you may convince yourself of by drying the Barley, by bruising it, by scorching it in a Frying-pan, and by pouring on any sort of simple Water, and lastly by pressing it in a Press, you get the Oil of the Barley, so that relaxes the Parts, which by the Inflammation are become impassable for the Blood and Juices thro' them, and they give way, and that troublesome Idea of Pain is abated. It is us'd moreover in Poultices for Pains of the Joints and Defluxions upon them, if you mix it with Vinegar and with Ship Pitch; for then it sticks close to the Part, and serves as an Interceptive or a Straitner of the Vessels, which being too wide, give way to a settling of Humours upon them: Acids alone with Barley will make it stiff and hard, and serve for the same Purposes, and such a Poultice is good to take off Scales;
if,

for Example, you boil Barley-Meal in sharp Vinegar or in Vinegar made stronger, with adding a little Spirit of Salt to it, it will be glutinous and repelling, and Leprous Eruptions are repell'd by it, to what Advantage, let those whose Concern it is, look to it; for I believe never was yet known, that these stubborn Scabs were driven into the Blood with Impunity or without Damage, unless a Provision was made for the Humour to pass thro' some other Door; and therefore if we try this Experiment, I desire either some certain Diuretick or purge be given frequently to receive and convey this malignant Humour out by the Kidneys or Bowels, or it is to be fear'd they are ill advis'd: For this Purpose, take every other Morning as much of an Infusion of *Sena* as will move you thrice, and next Day take fifteen Drops of Sweet Spirit of Nitre in a Glass of Wine twice a Day: You will meet with the manner of making an Infusion of *Sena* in any Dispensatory. Much otherwise does Barley operate on human Bodies, when it is fermented and brew'd into Liquor, than when it is boil'd, or given inwardly in fine Flower; for in the latter Case it binds by being glutinous, but in habitual Purgings, where it has been wrought into Beer or Ale, it certainly loosens the Belly; and the newer it is, the more certain is this Effect; and tender Constitutions who are troubled with windy Colicks, or frequent loose Stools, shou'd avoid it, as they wou'd the Bite of a Viper or any Poison: This

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is settled among Physicians at present, as an Axiom. It is a nourishing Grain, and its Juice is look'd upon to nourish more than its dry'd Flower : The Ptisan is both Food and a Medicine.

Wheat is more nourishing than Barley ; if it be made into Bread, and be unwrought or unleaven'd ; it is doughy, and very hard to digest, because its viscid and glewy Parts being put in Motion, cannot be thoroughly divided, at least in so short a Time as it stays in the Bowels, and therefore does it create Winds, Colicks, and fatal Obstructions. This is observ'd in Countries where this Bread is much us'd, which, I am told, they do in *Scotland*, and in the Northern Parts ; so that were it not for their hard and obstinate Labour, it would be impossible for such People to escape Diseases ; and these Disorders are increas'd if they eat it new from the Oven, for then it abounds with Water, and sticks to the Walls every where : Age betters it, because Bread grows lighter by Age, and loses of its Weight. If this be true, as it certainly is, what must we say of Pancakes, and such Cakes as are fry'd, without having any Thing in them to make them light ; they, in Effect, do all grow a mere Glew, and work within us as such, and make us liable to all Diseases arising from a glewy and gross Blood ; to wit, to Suppressions, to swell'd Legs, to white Swellings, and the rest. However, when it is fermented with Yest, and not made greasy, and if it be kept to
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moderate Age, it is very nourishing, and is thick as is convenient for a circulating fluid, which must cohere in a certain Degree. Our Housewives are not pleas'd with their crusts of Pies, unless they be greasy and lumpy; it is not hard to guess at the Consequences of such a Diet from what I have said, since our Blood is not to be made too thick; for then it would not run in our veins, and we should be destroy'd by the very means we make use of to subsist with. From these Sentiments you may know why in Fluxes of the Belly we make use of Hasty-Puddings made up of fine Flower of Wheat, because, as a Glew, it retards the Descent of our victuals; it plaisters up the Mouths of the glands, and hinders us from having so frequent Occasions; besides, it tempers the sharp and fretting Juices of the Guts, and so, in some measure, strikes at the Root of the Disorder. It is also from the same Manner of Acting, that its Flower is made use of inwardly to curb all Fluxes, even of Blood, from any part; for, let it arise from what Cause soever, there is a Necessity to close the Gaping of the Orifice, and it may be suppos'd to act upon an open Vessel, as Glew; and the very Blood running that Way more rapidly than to any other Place, will carry, in a sort of Hurry, all that's thrown into it, to that Door very soon. If we may compare Trifles to momentous Affairs, we see how readily a small Leak is stoppt with a Handful of fine Flower thrown into

into a Vessel ; it runs to the Hole in an Instant, and glews it up : and, indeed, this is consonant to Mechanicks, where the Fluids are observ'd to move rapidly thro' a small Passage, and to determine the Rout of the whole Fluids thither. It is conceivable and visible of what a glutinous Nature Wheat is, when its being steeped in Water, after you have taken off the Rind, and decanting the Water, and by repeating this steeping and decanting the Water clear off for ten times, or more, you have, at the Bottom of your Vessel, a Mass of fine Flower, which, made up into any Shape, and dry'd in the Sun, or warm Shade, upon a Brick, or broad Tile, is what we call *Starch*, which, we all know, boils into a Glew, softer or harder, as it has more or less Water join'd with it ; and it is this *Starch* which is made of our Bread, by the Force of Digestion and Dissolution, by our Drink, that nourishes and supplies our lymphatick Juices, and all other smooth Nourishment ; and hence is the Use of Bread so universal.

Rice is more viscous than Wheat, and is therefore more binding, and more windy Diet than it ; it is, however, very nourishing, and is us'd for Diet in Purgings : I mean it is nourishing, inasmuch as they who use it should have it greatly mix'd with a watry Menstruum or Liquor ; for otherwise this Diet never passes well. It is amazing to me to find our Cooks so fond of making their Rice-Milks and Creams so very thick, unless they would
thereby

thereby oblige those that feed upon them to drink plentifully afterwards, which they must do, if they design to receive no Damage thereby. In most Particulars it resembles Wheat in its Virtues. The Nurses make a Broth of it, in Fluxes of the Belly, and, I think, if the *white Decoction* were made of this Broth, it would answer the Physician's Ends much better in stopping of Fluxes, because, as the burnt Hartshorn is absorbing, this being asswaging, the Humours would be both suck'd up, or sheath'd, at one and the same Time. As for the rest, I shall conclude with this Caution, That as Rice is dearer than Wheat, it is more us'd in our Kitchens than Wheat, and many Uses are made of it there, which must be regulated so as to avoid making it too glewy, or the Feeders upon it must dilute well after with Water.

Oatmeal Victuals are not so glutinous as Wheat and Rice; their Jelly is slippery, and therefore more oily than either of the former: *Flummery* is the Jelly of Oatmeal; and it is a very nourishing Diet, because it is thick, but not sticking. It passes through all the Capillaries, or small Vessels, without stopping them up. It is good for a Diet in asthmatical and phthifical People, because it helps up their Phlegm. It is good in vapourish Constitutions, where there is a great deal of Sourness in their Bowels, because it smooths and licks up that sharp Humour. It is a light Diet, and keeps the Body open. It is better
Victuals

Victuals to stick to, than either Wheat or Rice; indeed, the Taste is not quite so agreeable to the Palate, but it is more wholesome than either: The Gruel commonly made of it, is no other than the Jelly of it dissolv'd in Water; and if Gruel were strain'd well, and boil'd up to a Glew, it might serve to make an *extempore* Gruel with warm Water, as the solid Soup now does, and be carry'd about as it is. All Grain whatever is more or less windy, because it affords a thick Nourishment, but Oatmeal is the least so, because the Air breaks easily through its Parts, and escapes without raising Colicks.

Millet Seed is dry and glewy Nourishment; we make no Bread of it in *England*, but it is much us'd in Puddings: As it is glewy and earthy, it stops Fluxes, and therefore a Decoction of Millet would do better than that of Rice to make the white Decoction of, because it would afford an earthy, as well as a glewy Substance, and bind more. Whoever feeds upon it, must be careful to wash well afterwards, lest his Blood grow too thick thereby. In these Puddings the Cooks ought to put some Spices to help to correct their Thickness, and to carry off those Winds that follow them.

Pease are of different Sorts, but all of them are windy, and gross Nourishment: The Soops, the Puddings, and the Dishes made of them, must be well season'd with Pepper, or some such hot Spice, or they who feed on
them

them would be pester'd with violent Colicks ; however, when they are green, they are good for sharp and salt Bloods, because they are sweet and smooth ; and when poor People are troubled with such a Sharpness of Humours, they should insist on this Diet in Summer ; wherefore our Sailors, when they find themselves troubled with the Scurvy in warm Countries, use this Diet at Land, and it cures them, if they are not far gone. I cannot say, that they agree with the *English* so well for Diet, because our Humours are naturally gross, or inclin'd to Grossness, and therefore are they us'd as a Change only, because they, who out of Wantonness indulge themselves with them, feel a Sting in the Tail of them, and are troubled with Colicks, and Pains at their Stomachs, which require much Physick, and warm Medicines, to extirpate them, and Strengtheners of the Stomach to repair the digestive Faculty, which is impair'd.

Beans are hard of Digestion, be what sort it will : The *Kidney Beans* are mealy, and not so glewy as the common, and therefore are they not quite so windy ; but they are apt to turn sour in our Stomachs, and to raise Gripes. To keep the Eaters of them from Damage, they must not eat them without a good deal of Spice, and they should drink a sufficient Quantity of Liquor after them ; that their mealy Parts may not turn a Paste, either in the Bowels or Blood. The Flower

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of

of the common Beans is us'd externally for Poultisses against an Inflammation, from Wounds, or in the Breasts and elsewhere ; to wit, they boil the Flower in Water, up to the Consistence of a Hasty-Pudding, and mix it with Vinegar, and apply it warm to the Parts inflam'd. This is the Midwives Poultiss for Women, whose Milk they endeavour to disperse ; and sometimes the Flower, mix'd with Fenugreek Seed, and Red-Rose Leaves, is made into a Poultiss for inflam'd Eyes : Many other Uses, too tedious to be nam'd, are made of them by Surgeons, but mostly for dispersing Tumours, and softning. In general, all Beans, the greener they are, the harder are they of Digestion ; and as we never eat them but when they are green, it follows, that they hurt us in raising Colicks, and hindering Sleep in a particular Manner, but principally because they contain much Wind in them, wrapt up in a gross Juice, and the Spirits made up of such foreign Nourishment, are nimble and viscous, that is, they contain Air and Slime ; from the first they attempt to frisk, but are fetter'd by their Viscosity, and they must then affect the Nerves, as they do the Stomach ; that is, the airy Parts endeavour to escape out of the slimy Parts ; but being detain'd in the Bubbles, the Air, the Slime and Stomach, are all drawn together, and the Stomach is convuls'd, or twitch'd and pain'd, so trembles the Nerve, and hinders Sleep.

Almonds are very nourishing; they contain much Oil, which is drawn in the following Manner; you take the Almonds dry'd, but not stinking; you bruise them, being blanch'd in warm Water, in a Mortar; then you put them into a Frying-Pan, and heat them a little there; then you moisten them with any aromattick Water, and put them into a Press, between two flat Boards, and squeeze out their Oil. This Oil is one of the most sovereign and common Oils that is us'd by Physicians in many Cases, as in Consumptions, Coughs, Hoarsenesses, in hard Swellings any where in cramp'd Joints, and where-ever there are Pains. The Almonds themselves are us'd in our Diet, in many Dishes: In general, they are fattening, because they smoothe all sharp Blood, which is generally the Occasion of Leanness; and the Creams, or Puddings, made up of Almonds, are an excellent Diet for consumptive People: The Milk made by Apothecaries, is a fine smooth Liquor; it dilutes and tempers hot Bloods, and is much us'd in Fevers, being only the Almonds blanch'd and bruise'd in a Mortar with Barley Water, and sweeten'd gently; yet it must be made fresh and fresh, because it won't keep: But as Almonds are easily, and apt to ferment in the Stomach; they are not convenient for Hypochondriack People, because they are mov'd too much in their Stomachs; and for the same Reason that these Patients can't bear sweet Things, they are inured by Almonds also; where-ever the Blood

is too Oily already, as it is in cholerick Persons, this Diet seldom agrees, nor shou'd any Victuals made of them, be attempted.

Wallnuts, are nourishing while they are fresh; but if they be old they are prejudicial to the Breast and Head; for as they contain an Oil, whilst this is fresh, it contributes to nourish, but this Oil by Age grows rank, and contains a good deal of acid Spirit in it, let loose by Age, which when we eat them fixes upon our Breast and Lungs, and it is no Fancy when we hear such, as eat plentifully of them, complain of Asthmatick Symptoms. Our common *Nuts* have the very individual Properties with Wallnuts, and no Wonder, since they also have a gross Oil in them that sticks in the Vessels of the Lungs, and makes the Eaters of them short-breath'd, but whilst they are just pulled from the Tree, they are nourishing, if they are taken in a moderate Quantity.

Chestnuts are a very gross and viscid Nourishment, yet if they be well diluted or meet with a strong Constitution, they turn into good Chyle and Blood; and where Persons are lean, they serve to supply fatty Parts to the Juices, provided there be no Obstructions to be fear'd.

Olives are a Fruit that we never have fresh in *England*; in *Spain* they are Red, and of a pretty Taste; which the *Italians* call *Dolce-Picquanti*, and we a *Sweet-Sour*: I shall pass over what Effects they find from them when fresh and ripe, but they are brought to us
pickled

pickled in Brine; and they serve as a Relish, which carries off our Slime out of the Stomach; we insist so little on them, that I shall only observe what is remarkable in their Oil, on which we feed so much; it tempers the Acrimony of our Humours, it serves to loosen our Bellies, and, if it agrees, it fattens; but Care must be taken, that there be no Obstructions; and our way of mixing Vinegar with it to make it agreeable in Sallads, is not altogether so wholesome, because it may be possible to make a Balsam with it and Acids, that wou'd not readily pass thro' our Veins; I advise therefore all Persons, who are apt to be swell'd at Stomach, to forbear this Mixture, or indeed any Oil at all.

Raisins, and *Grapes*, are laxative whether in *Grapes* or *Raisins*; either of them are nourishing, but *Grapes* are apt to blow up the Stomach, and occasion Fluxes: This our Countrymen experience in drinking new Wines in foreign Countries; wherefore in costive Constitutions it is good to eat *Grapes* or *Raisins* at any Time, when Occasion requires; *Raisins* are excellent in Coughs depending on a Sharpness of Blood; their Decoction, which we call *Ptisan*, is made use of for this Purpose: They relieve Hoarsenesses, and where we intend to sheath any Acrimony in our Juices: The sweet Pyes, Pudding, and Gruels therefore made of them, are proper for meagre, thin, and hot Constitutions.

Prunes, are a Nourishment apt to loosen and bring on Fluxes; their Juice is sharp and turns putrid; their Juice cools and helps Appetite, but great Care is to be taken of them; if they be dry and old, they bind, but if they be plump and green or fresh, they loosen and cause Fluxes: We use them at present in Juice with *Sena* to loosen the Belly, and seldom otherwise, because we have found their Use in Broths too loosening.

Cucumbers: They readily turn into a putrid Liquor, and in *August* and *September* we begin to feel the Consequences of them, for then their Juice in the Blood begins to become sharp and stimulating, and Fluxes and Vomitings, Colicks, and Fevers begin to rage from their working upon the Juices and Fibres: One wou'd be tempted to believe there is a specifick Quality in each Plant to attract such Juices from the Earth, or how comes it to pass that Plants of very differing Virtues shou'd grow so near each other? but this is best answer'd by the Figure of the Pores in each Plant, as may be seen in Dr. *Grew's* Anatomy of Plants. They are cooling and useful if moderately us'd, because bilious and cholerick Constitutions are refresh'd by them; but be careful of Excess, for you will sooner or later feel the Consequences.

Peaches; if moderately us'd before a Meal, they serve to create an Appetite; and after Meals they keep the Belly soluble and open; they cool and refresh hectic and warm Constitutions;

stitutions; our Design of eating them in *England* and elsewhere, is purely for the Gratification of our Palate, without any regard to Health, and we often destroy a good Habit, and encrease a bad one by our Excess; but in general, cold Constitutions shou'd not touch them, and the warm with Moderation.

Melons, are a watry and slimy Nourishment, and therefore are good in hot Bloods, and ought never to be touch'd by phlegmatick People; they are apt to turn sour and eager in the Stomach and to loosen the Belly, if not to raise Fluxes, as those who eat too much of them, find by Experience; and they seldom fail of swelling the Stomachs of those that are the most delighted with them: In Truth, little good is done by them, and much Harm.

Mulberries, are a grateful Sweet-Sour, and are therefore good in a small Quantity to raise an Appetite; they loosen the Belly; and the Apothecaries make a Syrup of them, which Physicians prescribe to be mix'd up with Simple Waters to make Gargles for sore Throats in Fevers, because they have a little binding property that cicatrizes any sore Part.

Raspberries, are us'd in the same Manner as Mulberries, for raising an Appetite, and to cool and refresh warm and hot Bloods; but all fruits loosen the Belly.

Strawberries, whether the Wood or Garden, are cooling and somewhat binding; as all ours they are a little Diuretick, and if they are eat at the Time of Womens menstrual

Flux, in any Quantity, they will endanger its natural Course: They may be allow'd in a moderate Quantity in high and burning Fevers; for they gratify Thirst, and cool the Tongue: They agree with most Palates, but are very good in Cholerick and hot Bloods: Our Coffee-Houses have got Raspberry-Brandy, but few have try'd Strawberries in Brandy, but they who are troubled with the Gravel or small Stones wou'd find an Advantage by making a strong Infusion of them in this Liquor, because thus mix'd, they become diuretick.

Mushrooms are not the best Nourishment; they are made agreeable enough to the Taste, but are too earthy for common Food; they are mucilaginous and earthy, and therefore are hard of Digestion, and when pickled are yet harder of Digestion, than when fresh; they who broil them with Pepper and Salt act reasonably, for nothing, save so warm a Spice, can cure their Slime: If by eating them too plentifully any Damage should ensue, a Vomit ought to be taken, or a little Physick to carry them upwards or downwards, and then fix'd or Volatile Salts or Wormwood Wine shou'd be taken to prevent their Consequences.

Beet Roots boil'd, are loosening and afford a smooth and cooling Nourishment; they have a sort of nitrous Taste, and are therefore gentle Provokers of Urine; and as they have a gentle Sweetness in them, they temper hot and cholerick Blood, and are good for those who want to temper Acrimonies and Sharpnesses: They

They are assisted in their cooling Property by the Vinegar they are eaten with, and are good after any Debauch to refresh and cool.

Spinage : This is also cooling and loosening, and us'd with Butter after Supper, they secure you a Stool next Morning : The Nourishment they afford, is sweetening, and tempering sharp, acid, hot Bloods.

Mercury is us'd in the same Manner, and for the same Ends, as *Spinage*. As it keeps the whole Year round, I wonder it is not gather'd, and kept the whole Winter for boiling : It is so innocent, that it only inflates the Stomach a little, which however is soon help'd, because it carries off itself downwards.

Cabbages are a loosening Plant, but they disturb and puff up the Stomach : They are said to be useful in Broth after a Debauch, because they contain a good deal of a watry and slimy Juice, which is also a little fetid and bitter, and this helps to prove laxative and diuretick : The Salt that is in them is somewhat caustick, because their Ashes are so.

Sparrowgrass, or *Asparagus* boil'd, are smooth and slimy, and therefore relax and open the Belly, and promote Urine, and give it a Smell. The boiling takes off all, or most of the warm Parts ; save some few, which are manifest by the Urine. They are reputed a good Diet in Obstructions of the Liver, and in Pains from sharp Humours, and are therefore accounted good in Scorbutick Cases.

Parsley

see
Herb.

Parsley is good for provoking the menstrual Flux and Urine, and this we use frequently in our Diet. It is a good Remedy against Wind, and is good in Asthmatics; whoever then are troubled with Suppressions, and Coughs, and windy Stomachs, should chuse Meats where this is us'd.

Radishes are heating, as may be known by their Taste, and raise Winds, and give an ungrateful Remembrance to the Eaters of them: They are very Diuretick; and this is so esteem'd by Physicians, who have order'd a Water of them good for that Purpose: If you have a Mind to have them hotter, it is but splitting the Radish into four, and cutting out the Pith: They are good for phthisicky Constitutions, because they help Expectoration; and dropical Legs are help'd by them: Cold Stomachs bear them well, and are help'd by them.

Horse-Radish is us'd with our Victuals; but its Heat is so excessive, that we generally mix it with Vinegar, and so make a mixt Salt of them: The colder Stomachs bear them with Ease, and they make People, whose Bodies are loaden with gross Humours, leaner, and their Bloods are thin'd by them: They who are troubled with the Scurvy, Dropsy, Spleen, or Phlegm, should eat plentifully of it; they are Expellers of Gravel, and open Obstructions of the Liver; but their Heat is too excessive for common Use, and a little Vinegar makes them tolerable for our Food,
and

and a small Quantity does not much abate their Virtue.

Garlick abounds with a volatile oily Salt, and is useful in Soops to correct the viscid and acid Humours in our Blood; we, in *England*, are not so much in love with it as Foreigners, and yet we want it generally more than they do. It is good in splenetick Constitutions, and in Worms; but its Taste is so disagreeable, and it raises Tumults in the Bowels, by its too penetrating Salts, and may therefore be reputed violent; the boiling, indeed, does abate this Quality: It heats, and excites Thirst, and well it may; for, if it be apply'd externally, it makes the Part red, and will raise a Blister if it lies on any time. It is reputed good against the Bites of a mad Dog, if it be given inwardly, especially. I have known it made use of against inveterate Coughs, with Advantage; and, I believe, were it not for its nauseousness, and the disagreeable Smell it gives to our Neighbours, it would be more in use. It is us'd by Country People to promote the menstrual Flux, and to play unwarrentable Pranks with, of this Kind. Infus'd in Rhenish, it provokes powerfully. 'Tis pity so useful a Thing should be so offensive: *Onions* are of the same Nature, but of a lower degree.

Pepperwort Root; this is a sort of Root that is better than Horse Radish; it lasts longer, and is yet more warm; and therefore ought it to be eat with Vinegar, to temper its Heat; and

and it is good in cool Constitutions, in dropfical People, and Afthmatics. It is not good to eat these very warm Roots without Vinegar, which makes a mix'd Salt of them, that creates an Appetite; and the Root being chiefly volatile, this Force is exerted in the Blood, as appears by the Effects; it takes off the cold Scurvy effectually.

Cresses; these are us'd in Diet with Vinegar; they are very warm; they provoke to Venery, and have a Power of opening Obstructions, and of promoting the menstrual Flux; the *Indian* are the best; they are accounted good against the Scurvy of our Northern Climate: If they are eat in any Quantity, they provoke to Stool.

Parsnips are a sweet and nourishing Diet; they supply a Juice to the Blood that is very balsamick; they are esteem'd also diuretick, and provoke the Menfes, and to Venery, because they contain some volatile Salts in them.

Quinces in Diet are grateful to the Stomach; they are gently astringent, and we use them in Marmalade in Fluxes; wherefore, either bak'd by themselves, or in Pies, they are a good Nourishment, for such as are subject to Fluxes, or for such as part too readily with their Victuals downwards.

Apples; some are too fond of this Fruit; they ought in Diet to consult Health, and not their Palate. What should a cold Stomach do with this Fruit? Or what should they, who
are

are too loose eat them for? In the first Case they will raise Colicks, and in the latter Stools. They cool and loosen, and help to give an Appetite.

Pears are more loosening than Apples, especially the sweet ones; the 'tarter sort cool; and the harsh Pears are binding; each therefore must suit their Condition of Health, and he who is costive, should not eat the harsher Kind: He who is of a cool Habit, must avoid the tart Pears especially; and they who are apt to have loose Stools, must not meddle with the sweet Pears: The Bergamot Pears are of the latter Kind.

Capers, as we have them, are sour, and hard of Digestion; they disturb the Stomach; the Vinegar is so imbib'd in them, that they are more sour than bitter, which they naturally are; for they are esteem'd aperient, and are us'd as Provokers of the menstrual Flux, and of Urine, and are commended in Hypochondriack Cases; but as we have them here, they would stop the Menstrues, and cause Melancholy, because, in Fact, they are kept constantly in Pickle, and they are forc'd, ever and anon, to renew the Pickle, which, at last reduces them to a Sponge full of Vinegar.

Sugar is a main Ingredient with the *English*; so many things are season'd with it, that a particular Detail of its Properties should be laid open: It is agreeable to the Palate, but its Farewel is not quite so agreeable; for its

Sweetness

Sweetness gives Relish to much of our nice Cookery, and Physicians are not behind with the Cooks themselves; nay, we find one writing in its Praise, like a Hireling. It is us'd by them in their Syrups most plentifully in all consumptive Cases, and Coughs, to the very Destruction of their Patients Stomachs; it is us'd as a Balsam for wrapping up all sharp Humours; and, as the former Author says, it sweetens the Blood and Juices, and renders them so balsamick, that Wounds and Ulcers will cure the better after taking it. He denies, that it contains any strong acid Spirit; however, it is plain, its Spirit will make Sugar of Lead; it doubtless does envelope or sheathe sharp Humours; but then it leaves an Acidity behind that preys upon our Bones, and therefore rots our Teeth. It is this Sour which lies hid in it, that makes it prejudicial to splenetic People; their Blood is esteem'd too sour already, and needs no Addition to increase that Quality. Their Juices are already offensive to the Nerves; they need have no Diet to render them more eager. It is true, that Sugar will fatten, as appears by the Swine in the *West Indies*, which are fed by the Sugar Canes; and that these Animals, so fed, are extremely luscious; but this Fat argues a Sourness in the Sugar. Chymists, by a certain Oil, and a certain acid Spirit, mix'd together by Heat, can, in a very short Time, make a Substance so resembling Fat, that it cannot be discover'd from it. If then they who feed on

Sugar

Sugar much, would be safe from Damage, they should take plentifully of volatile Spirit of Hartshorn in Water, and they will prevent all Harm ensuing. Hyfterick Women should avoid all sweet Things in Diet, for the aforesaid Reason. It is, upon the same Account, ill Food for Epilepsies, and all sorts of Convulsions, and therefore, let Mothers and Nurses look well to Children, that their Food be not too much season'd with it ; or let them be very exact in giving some of the Hartshorn Drops, I just now spoke of, frequently. Children are not come to the Use of Reason, and, perhaps, cannot be tempted to swallow down their Victuals without some of it ; but then they may justly lay the Blame on this Seasoning, as the Cause of so many Convulsions, as we hear Families complain of, their Children are seiz'd with.

Turneps, when boil'd, are a sweet and smooth Nourishment ; the volatile Parts fly off in the boiling, and leave the smooth behind ; so that they are a good Nourishment for asthmatick and coughing People, because their Oiliness helps their Phlegm to come readily up ; for those People are generally worse, if they don't spit freely. They are, however, windy, as are all this frippery and thin Diet, because their slimy Parts stick closely together, and a good deal of Exercise and Warmth is requir'd to divide them ; so that they are windy and cold, and are not fit for very weak Stomachs ; and the less they are boil'd, the more windy

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are they, and therefore this should be carefully regarded ; for if the Cooks leave any of the volatile Parts in them, they are toughish and hard, and not to be readily overcome by the Stomach. Where the Blood is too eager in Consumptions, they are very profitable, and our Housewives make a Syrup of them, which they have recommended in great Coughs. This Syrup is sweet from the Turnep, as well as the Sugar, and may be taken with equal Advantage, as balsamick Syrup, or that of Maiden-hair, but no greater. Let not therefore consumptive People depend upon large Promises of Cures from such Trifles ; for it is not a sweet Composition alone that can remedy so terrible a Disease, where so many Ends are to be answer'd ; by such a Syrup they may cause the Cough to be more easy, and then may make them spit up their Phlegm ; but, God knows how far this falls short of the whole that remains to be done. We give the Patients Syrups, and other proper Pectorals for this Purpose ; but then, unless we have Regard to the Defluxion, by proper Revulses and Discharges ; unless we keep the Lungs quiet by Anodynes, or sleepy Medicines ; in short, unless we take in all the Circumstances, which are numerous, and prescribe properly for them, the Patient is hurry'd out of our Hands into the Grave, often in less Time than six Weeks ; and who is to be blam'd for such Indolence, save the good old Women, who, too often, interfere and hinder the Pursuit

of regular Methods. This Syrup is also us'd by the Women, for the Thrush in Children, because it softens and cools, and hinders the sharp Humours from further corroding the Jaws, and also helps to make the white Membranes fall off; but if they would add a little Allom to this Syrup, they would succeed much better, because Allom hinders these Scabs from creeping further, and dries them up. However, as these Thrushes are often fatal to Children, inasmuch as they throw out sharp Humours by the Mouth, and as the Allom would not agree in this Case, because it would hinder Nature in her Efforts; therefore it is always safe in this Case to use the Syrup, but not always the Allom; because the Syrup only tempers the Humour, and keeps the Mouth from too high an Inflammation, which naturally follows this breaking out; but were it natural, or rather an useful Effort of Nature, the Allom would inflame the Mouth more; and this may serve to shew you, whether the Allom will be of use or no. If the Parts grow harder, and red and swollen, upon using Allom in the Syrup, which you will know in twice or thrice using, then stop its Use; but if the Parts scale off, and grow soon well after it, continue its Use, because we must always favour Nature, or direct her when she errs.

Succory or *Endive*; This is us'd in Salad, and is a very wholesome Plant, because it cools and opens: It is cool, because it is watry,
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and gently slimy, and it is opening, because it is gently bitter. This Salad is us'd much among the *French*, to cool their Blood, and keep their Bodies open ; but they eat Salads, as if they aim'd at correcting thier Blood ; but we, as if we aim'd at a fashionable Gratification of our Palates. It is good in hot Obstructions of the Liver, that is, where the Blood is gross, and grows grosser by warm Medicines, that also open. In all Obstructions of the Liver, there is a Yellowness on the Skin and Water ; but in the warm Obstructions of it, besides, the Yellowness, there is an excessive Heat in the Palms of the Hand, and Soles of the Feet, besides a craving Thirst ; and in this Constitution *Endive* is a proper Salading. If the Stomach be overheated by any Excess of spirituous Liquor or a hot Blood, it raises Thirst of Course, and *Endive* is excellent in this Case.

Lettices, of all Kinds, are a cooling Salad, and, it is the common Notion, that they help us to sleep better ; their Virtues much resemble that of *Endive*, only they are more cooling, and have a sort of an opiate Smell. They keep the Belly open, and refresh hot Bloods ; after a Debauch they cool, and give Freedom of Stools ; but we must eat plentifully of them, if we design any Good from them. They dilute the Choler, and cool by diluting those sharp and fiery Salts ; but this Effect they have, if you eat too plentifully of them, they hinder the venereal Appetite, especially

especially in those of Years. It is a receiv'd Opinion, even among Physicians themselves, that the distill'd Water of Lettice is a Promoter of Sleep. If, indeed, the Heat of the blood be excessive, and the Nerves tremble troublefomely from that sharp Heat, it is hardly possible for such to fall into a calm Rest : If this be drank plentifully of, it will dilute those Salts, break their Points, and divide them into greater Distances ; so that they cannot stimulate, or prick the Nerves, thro' which they are to pass so violently, and thus will help them to sleep better ; but, I believe, good elemental Water would have the same Effect. It is good for suckling Women to eat Lettice, because, as its Nourishment is watry and slimy, and gently opening ; and as its Juice is milky when fresh, it is not amiss for Nurses to feed upon it, especially if they are of a warm Constitution ; because it is already sort of Chyle, by its Colour, and will soon be converted into Nourishment, because its leaves are tender, and are easily therefore divided into small Particles, and its Juice is soon extracted. If Men have been guilty of Excess in Fuddling, Lettice will recover them from it, especially if it be eaten with Vinegar ; but Vinegar alone has this Effect, if taken plentifully, but then Lettice is not so prejudicial, and may be made free with.

Mustard is so commonly in Use, that, it is resum'd its Use is well enough known ; but we may justly enough say, it is better known

what it is to eat with, than what it is good for. All know that Mustard Seed, infus'd in Wine or Beer, is reckon'd good against dropfical Legs; and, it must be suppos'd to be good for Digestion, because we generally use it with salt Meats, as pickled Pork, or salted Beef, or with Goose, or, indeed, with any thing suppos'd to be hard of Digestion, and, as when it is apply'd outwardly to any Part, it raises a Blister, or, at least, makes it red and painful; so may it be allow'd to act upon the Skins of our Victuals, and make them spirt out their Juices contain'd; but then we ought to reflect how our Stomach itself escapes that rude Shock; which may readily be conceiv'd, for Custom is a second Nature, and our Mouths and Stomachs will bear what the Lips won't. A little Broth spilt upon the Lips in sipping it, will scald them; whereas in the Mouth it produces no such Effect; that Passage, and the Stomach also are lin'd with a slimy Juice, which descends thither from the Skin, is dry, and has nothing to hinder this Effect of Heat. It is useful for such as are troubled with the Scurvy, and therefore, when Persons are short-breath'd, so as they can't mount up Stairs without taking Breath; when they break out in black Spots; when there swims a Crust upon their Water; when they feel a Straightness across their Breasts, and Pains and Windiness at Stomach; this is an excellent Sauce for their Victuals, and if it be found too moving and biting, we may

mix

ix it up with a little Vinegar, but a small quantity suffices in this Case, lest we overthrow its Virtue, and render it ineffectual. The Stomach is render'd more vigorous by the Use of Mustard, because where it is relax'd by being soak'd in a watry Blood, that circulates through its Coats and Vessels, this heat gives its Fibres fresh Vigour, and makes it grasp its Contents better, and press out the superfluous Juice from the Fibres of the Meat, and makes it toss the Victuals forcibly about from Side to Side, till it parts with all the juices they contain, which done, it is thrust downwards into the Guts to be further labour'd and toss'd into Chyle and Excrements; the best of which runs into the Blood, and the rest is cast off into the Jakes. It acts upon the Stomach as it does upon our Nostrils, by warming it; nor does it cease there, for certainly when the Juice of it is in our Vessels, it gives every Vein and Artery it passes through the same Twinge in Proportion, as the Blood is more or less impregnated with it; and therefore is it good in drowsy Constitutions to give natural Motion to the Vessels, that they may press on the Fluids, which, in some measure, stagnate, that is, move slowly in the Brain, and fill it in such a Manner, that sleepiness ensues; for a loaden Brain is a drowsy one. The Force it has of making our Fluids move forward, occasions its being given before Fits of Agues, and it has been known to prevent a Fit, because it has made the

Blood fluid enough not to be congeal'd at certain Intervals, and consequently has cur'd some Agues. Some have taken a Spoonful of Mustard, in order to make them vomit ; it will work both upwards and downwards, by its twinging Parts ; but it must give their Stomachs a vast Uneasiness, and make them very thirsty ; and none but indigent People will venture upon such an odd Vomit, when so many easier may be found. Women who are subject to Stoppages of their monthly Flux, should eat a good Quantity of Mustard to their Victuals, because as it is warm in an eminent Degree, it thins and opens the Blood-Vessels every where. When the Blood is made thinner, it possesses a larger Space, and takes up more Room than when it was thick and gross ; the Vessels in which it moves are flexible and yielding ; and as the Blood swells, they are enlarg'd, till they open where they ought naturally so to do ; and the Reason why they are open'd no where else in such a Case, is, because their natural Frame is such, that the Vessels of the Womb, or its Passage, are thinner, and more liable to yield than the Vessels any where else : Unless therefore some Accident prevents, such as a Tumor, or some Eschar, or some such Circumstance, the Blood will flow from these Parts, more readily than from any other Place : But whilst you feed upon this Seasoning, as a Diet for relieving a Symptom you have an Inclination to get rid of, I advise you to take Care that
you

you don't over-act your Part ; because, if you insist too long upon its Use, you will dry the Blood too much ; for, as it passes readily by Urine, it draws off all the thinner Parts, and leaves the grosser behind in the Vessels : Now while you use it with Discretion, and in proper and seasonable Doses, and gradually, you answer your End in Time ; but if you make too much Haste, and swallow down too much of it, it deceives you, and you are made worse than before you begun its Use ; for I have observ'd it much more difficult to cure a Stoppage of Womens Months, from a gross and over-heated Blood, than from a gross and cold State of Humours ; because the latter melts down with volatile Medicines, (such is Mustard-Seed) and Steel ; but the first are made worse by such Remedies : We know the latter Case by the Coolness and Paleness of their Bodies, but the first have a great Heat in their Palms and Soles, and are mostly feverish. If therefore you have a Coldness and Chillness all over you, along with such a Stoppage, Mustard is a Kitchen-Remedy for you ; but as soon as it has done you Service, stop there, and be contented to be well. Great and long Hoarsenesses are remedy'd by its Use ; and some, who catch Cold, are not so much troubled with Coughs, as with a gross Humour, that lines their Wind-pipe, and makes them hoarse : If this were a thin, sharp Matter, it would not fail to tickle, and then they must cough of Course ; but the Thickness of

it makes it cling close to the Lungs, and the Air, which ought to run glibly out of the Passage, is stoppt, and they speak hoarse; besides the Pipes grow wider by being made more flabby with Phlegm. As the Phlegm is the sole Occasion of all this Inconvenience, we must drain it out of the Blood by Physick, if necessary, and the plentiful Use of Mustard will dry it up, and clear up the Voice.

Pepper is another Seasoning much in Use, and it is of a very biting, pricking Nature: There are several Sorts, but we generally use the black Pepper; and as all their Properties agree, we shall speak of them all in general. There are many Meats and Dishes we eat Pepper with, and as they are sovereign against Cachexies, and bloated Constitutions, they ought to be us'd in a plentiful Manner in Diet, by Travellers into the Northern Pole: The Fishermen, who are oblig'd to take Voyages into *Greenland*, have Occasion for such a warm Kitchen-Drug to keep their Blood from freezing; nay, in severe Frosts in *Norway*, *Denmark*, *Sweden*, and *Muscovy*, they are constrain'd to use Peppers in Brandy, to keep their Blood a running; for it frequently happens there, that Peoples Extremities gangrene, and fall off, with the Excess of Cold, or, however, the Parts are often benumb'd with the Cold; the first Effect of it is produc'd in the Fibres, and the Continuance of it propagates its Consequences into the Blood. I will take the Liberty here to digress a little into
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the Manner of proceeding on such Occasions, because it falls in naturally, and because there is somewhat particular in the Cure of such frozen Parts. If Apples are frozen, and can't be eaten for their Coldness, we put them into Water, and let them stay there a while, and they become eatable: In like Manner Eggs may be unfrozen by Water, in which they swim when frozen; but as soon as the Frost is taken off, they sink to the Bottom. It is somewhat surprizing, that Water should take out the Frost from Bodies; but so it is, and for this Reason it is agreed on by all Practitioners, to plunge the benumb'd Parts into cold Water, before you approach the Fire, or before you bathe the Parts with hot Stüpes: From all which it appears, that Parts freeze from some sharp-pointed Particles, like Daggers, entring the Pores and Skin, and cutting off all Communication between the Vessels every where, which also, at last, affect the Blood, and congeal it: If then these Particles be saline, they will be dissolv'd in Water, as all Salts will; we must then be convinc'd they are saline, because Water dissolves them, and when they are dissolv'd and wash'd off, then is it safe to approach to the Fire; but not till they are dissolv'd by Water, because Fire gives Motion to these Salts, and they tear all asunder where they are fix'd: By this Reason some Appearances are easily solv'd, which otherwise would remain a Secret. We find, upon a severe Cold seizing on our Fingers, that, as soon

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soon as we come near the Fire, and grow warm thereby, our frozen Members begin to swell, and to tingle, and even smart violently, if no further Damage ensues ; now the Fire is so far from melting down these hard Salts, that it exhales their Moisture, and makes them much harder ; it also, having harden'd them and made them more rigid, gives Motion to them, so that they are toss'd on all Sides, and tear, or at least press sharply upon the Fibres, where they are fix'd in, like Wedges, and give such exquisite Pain, as to draw the Humours forcibly thither, and so heave up the frozen Fingers or Toes into a large Size ; and therefore if these Salts are first dissolv'd by Water, all this Inconvenience is prevented, you may presently approach to the Fire, or use warm Cloaths to the Parts, and they will recover : This Property of Water is evident in frozen Rivers, where as soon as Rain bedews them, the Frost disappears in an Instant, and the Ice melts into its former Shape : I don't care to enter into the Dispute broach'd by Philosophers, whether, to wit, Cold be somewhat positive, or barely privative ; that is, whether any Body enters into Water, or any other Liquor, to freeze it, or whether the Cold only arrests the Motions of the Fluids ; all I shall say on this Head, is, that by the Waters taking off the Frost from frozen Members, one would believe it is rather somewhat positive ; if it were not, a Privative affords no Room for Relief ; for no-
thing

thing has no Properties, nor any Indication. It is greatly penetrating and inciding, and for that Reason, if there be any Phlegm in the Stomach, it wastes it, and makes it fit to pass into the Blood, and digests it into a proper Substance for Blood; there is, as I may say, a specifick Thickness and Consistence of Chyle to make good Blood of. If our Victuals in our Stomach be too grossly prepar'd, and is too doughy, by consisting of phlegmatick Nourishment, *Pepper* must be added to such Diet, in order to its being converted into a Mass thin enough, to enter into the small Mouths of the Lacteals, and the Blood, there to circulate, in a proper Manner, without sticking in the Ends of the smallest Vessels, and becoming obstructive; For this Reason *Pepper* is conveniently mixt with Pease-Soup, with Fish, with Oysters, with Eggs, with Milk, with any Diet of a glewy Nature, because it gets into the Substance of the viscid, and divides it into a thin Mass, and hinders them from turning thick; but you must have a care that you take it in a just Quantity only; for if you do exceed, as you may guess by Thirst ensuing, you may inflame your Stomach, and even corrode it; such a strong volatile Salt, as it contains, and very soon exerts on the Tongue and the whole Channel of the Stomach, makes our Stomachs bare; and when that happens, it is high Time to forbear its Use, or we hurry on a Number of ill Accidents; as Pains, Vomitings, Purgings, Fevers,

Fevers, Inflammations, Thirst, and the like ; but if it be judiciously used, it takes away Colick Pains, raises the tough Slime of our Stomach, that gives these Pains, and causes the Wind to escape readily : Where there is perceiv'd a Sourness in the Stomach, as may be known by four Belchings, there Pepper may be used with Discretion to good Purpose : Sour Humours are not to be too suddenly or too hastily taken away ; if you do attempt it, you create great Disorders in the whole Animal OEconomy : The same will happen within you, as we see happens without us, when we mix a large Quantity of volatile Spirits with Acids, a great and sudden Commotion and Struggle arises ; for Example, when you mix a good deal of Spirit of Hartshorn with Spirit of Vitriol, Bubbles spring up furiously, and continue to do so for a considerable Time ; in like Manner, if we take too much Pepper in four Belchings, the Pepper and the Acid struggle mainly together, and give a great Uneasiness to the Stomachs of such Persons ; whereas such a Fund of Humour must be attack'd gradually ; we must destroy but a little at a Time, and must gain a Victory by Piecemeal, not by Force : The Blood of those whose Stomachs are crowded with Acids, is also cramm'd with them ; for it is not likely that they, who have four Belchings, and have therefore avoided, for a considerable Space of Time, any four Diet, can be supply'd with such Sourness, but from the Blood ; and the
same

same Caution ought to hold here also; it must be taken leisurely to do any good: And this is the Case of Hypochondriack People, their Acidity must not be attack'd gently. Hear the great *Boerhaave* on this Topick. --- ' If, *hyper*
' *says he*, you attempt a Cure by Purgatives,
' the sound Humours, and those that are easi-
' ly mov'd, are expell'd, the gross and tena-
' cious are left behind, and the Disease is
' made worse; if you attack it with strongly-
' stimulating, and dissolving Medicines, very
' often the Matter being suddenly dissolv'd,
' becomes acrimonious, and rushing with great
' Force against the tender hepatick Vessels,
' destroys them, from whence arrive many
' and incurable Ills: Hence the Matter is first
' to be render'd softly moveable, by finding
' out the specifick Nature of the predominat-
' ing Acrimony; then, by giving saponaceous
' Medicines, wherein resides an Acrimony,
' opposite to that which is the offending Hu-
' mour; we must go on in the Use of these,
' until the unequal and weak Pulse, the Nau-
' seousness, the Anxiety, and the little Fever
' betoken the Motion of the Matter; then
' must we, by giving gentle Laxatives, easy
' Glisters, Whey, mineral Waters, and such
' like, expell it. --- And, a little below, talk-
ing of the ill Symptoms produc'd by the
melancholick or sour Humour, call'd *Attra*
Bilis, he says, it must not be melted down
without Discretion, because the Difficulties are
great, and easily excited, and hard to be mo-
derated,

derated, because the Acrimony is so excessive ; and here he advises mostly Diluents, and such Anti-acids as are moderate in their Effects : And this, in Effect, is what all Physicians agree in ; the Flushings occasion'd by mixing of four Things in the Blood, are also caus'd by the eating Seasonings of a volatile Nature when the Blood is sour ; for it is the same, whether we take four Things and make a volatile Blood heat, or we mix volatile Things with a sour Blood ; Flushings will be the Consequence of either. This Drug is used in Agues with Success to put off a Fit ; a few Grains of it will have this Effect ; and as it is of a volatile Nature, it soon communicates its Virtue ; wherefore a Tea Spoonful or two of the Tincture given alone, without any Mixture, may be try'd, or six or eight Corns of it swallow'd down an Hour or two before the Fit, has often prov'd successful : This I speak to such as can't go to the Price of the Bark, or won't undergo a regular Cure ; it prevents the cold Fit, it causes Sweat plentifully, and carries off the Cause, if the Blood be not too much loaden with feverish Matter : But if that prove the Case, as it is much to be suspected in the Decline of the Year, I can give no Encouragement to proceed ; because you endanger an Ague's turning into a continued Fever ; for the Pepper inflames all those Humours it can't carry off, and it is scarce credible, that Humours that abound, and are highly depriv'd, can be all ready to pass off :
these

these then that are not in a Condition to move, will be heated, and cause a continual Struggle, till they become fit to pass : This Mistake resembles the Ladies red Powder, they so often artfully occasion Fevers with, that I must class them together ; they, forsooth, observing any of their Family to be feverish, command them to get into a warm Bed, give them a Dose of their red Powder, which is made up of very warm Ingredients, and hurry, by this extraordinary Diligence, their Menials from a common Cold into an actual Fever ; whereas, if they had made them keep warm, or, at least, confin'd them to their Room for a Day or two, caus'd them to refrain from Flesh Meat, oblig'd them to drink Posset-drink or Sage Tea, and kept them to a meagre Diet of thin Water-gruel or Chicken Broth, the feverish Cold, or even Fever beginning, would have been nipt in the Bud : Indeed, in the Spring, it will happen, that two or three Ague Fits carry off a Quantity of Humours, and terminate their Disorder ; in this Case I have no Objection to some Corns of Pepper. It is a good Diet for such as are troubled with windy *Colicks* habitually ; but then I wou'd advise such to keep their Bellies open by Intervals during its Use ; if you take any Remedies against Wind till this is done, you raise Wind indeed, but cannot get rid of it ; that is, the Cells of the great Gut, call'd *Colon*, are fill'd with Excrements that perchance stick to its Coats, and do bung or cork up its Passage ;

sage ; if, in this Condition you give Carminative Drugs, or Drugs to expell Wind, you raise Wind enough to blow up and swell your Guts, but having not disengag'd the Excrements, there is no Passage for them downwards, and you do but double your Distemper : This I have often experienc'd, when no Help has been at Hand, that the charitable Mistresses have order'd a pepper'd Drink to be swallow'd warm, and have order'd a warm Bed for their Servants seiz'd with the Colick ; all which has blown them up worse, till they have been forc'd to call in Assistance for them ; whereas if they had order'd Chamomile Flowers to have been boil'd in Water, and a good deal of Butter, with a Spoonful or two of Salt, to be mix'd up together, and to have been thrown in Glisterwise, and to have waited till this had pass'd freely off for three or four Times, then their pepper'd Ale or Wine would have prov'd of excellent Service : Thus Pepper is noted for Digestion of windy Humours. It is used along with Allom in Powder for a Relaxation of the Uvula, or, as it is vulgarly called, when the Palate of the Mouth is down ; for the Allom contracts the Fibres, and the Pepper exhales the Moisture that relaxes it. I have known it used in a Steam for Throats much inflam'd, after Bleeding, and perhaps Physick and Blisters ; and its Steam being receiv'd from a small-mouth'd Jug, from Water in which it is to be infus'd into the Mouth, has relax'd the Part, and dispers'd the Swelling

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ing there. There are some Poisons that Pepper is good against ; for Example, if any one has eat too many Mushrooms, and is thereby blown up at the Stomach, or breathes very short, Pepper is necessary to be taken to correct the Thickness of the Blood, which is occasion'd by these poisonous Products of the Earth, they springing out of rotten Threads of Plants, whether by any Seed, or what, let Botanists determine ; nay, in Case Opium should produce any ill Effects, Pepper is a proper Drug to insist on by way of Kitchen-Physick against its Inconveniencies. There are Berries, which Children often are deceiv'd with hereabouts, and which are very beautiful and pleasant ; they are the Berries of Nightshade ; they are poisonous, and make them rave ; when you have vomited these up again, if Help is call'd Time enough, give them Pepper as plentifully as you can in all they take, it corrects the bad Effects of these Berries.

Cloves : We use them mostly in Broths and Soops to give them a little Taste : They are at present not so much used as formerly, but I see no Reason for it, because they are very useful upon many Occasions ; they are good against Wind in the Stomach, because they contain fine aromattick, oily, and subtile Parts, that will break thro' any Obstacle that detains the Wind ; but then you should be sure you are not cheated where you buy them ; for if they are decay'd, or have been distill'd, they

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lose all their Oil ; the Taste will best convince you of this Deceit ; for if upon tasting them, you find them flat, and without a biting Heat upon your Tongue, they are of no Value ; or if you have any Quantity by you that has lost their Smell, and are therefore of no Use, steep them for some time in Wine, or moisten them with it, and let them stand in a cool Place, they recover their Smell, and become as good as ever : They are of good Use for decay'd Venery, by taking their Powder to some handsome Quantity in Sack once or twice a Day : Thus the aged and jaded Constitutions often have Recourse to Cantharides to produce this Effect, and hazard their Lives by it ; whereas these may be taken in a pretty large Quantity, and no ill Consequences will ensue, and they have been confess'd of use by many. They corroborate the Nerves, and all nervous Parts, such as the Stomach, the Bowels, and Womb ; for all nervous or membranous Parts are apt to grow loose and flabby, more especially the Womb ; and a discreet and repeated Use of Cloves would defend many young Women from the Whites, which is a Misfortune many Women of all Ages are subject to, and which they might either prevent or cure by insisting on this Drug : This Disorder is attended often with another, namely, Barrenness as a necessary Companion : We are not so well acquainted with what Conception is, or, rather, how we are begotten, as we are with the Impediments to Generation ;
and

and this is too well known, to wit, that Women subject to the Whites, are often barren, because to receive, retain, and convey the Matter of Generation to its proper and determin'd Station, is the Office of Vessels fitted for that Work ; and we find that great Work of peopling the World, falls seldom to the Lot of moist and phlegmatick Wombs ; those therefore of opulent Families shou'd, in proper Seasons, examine from Time to Time into the Condition of this Part in their Female Children, for fear they some time or other become Wives, without the Hopes of ever being Mothers, and Families become extinct thereby : If this be the Case, it is no great Hardship upon these young Ladies, to take a little Powder of Cloves now and then in a Glasse of red Wine ; and the best Time to take it, is when they have the Whites upon them, or after their monthly Course is past, especially if after it they find any Flux of watry or slimy Matter from the Part, which is very usual : In this Manner they will prevent the least Degree of Whites, and keep that Part perpetually in good Order, and fit for Generation. I mention nothing of the Oil of Cloves, because that being to be had at the Apothecaries and Chymists, is not the Province of the Kitchen ; and my Design in these Sheets is only to mention those Things that are us'd in Families as Kitchen-Physick, and to let them see what Remedies they have in their own Store-Rooms, and how to make

a more extensive Use of them, than they do at present.

Coffee. Its Uses to disperse a drunken Fit, or to take off its Effects, and to keep us awake, are too much receiv'd to dispute them ; it has these Effects by proving diuretick, and carrying off by the Kidneys whatsoever is offensive to the Blood ; for we find ourselves hotter after taking Coffee, in Proportion to what is drank of it : Its Salt is a fix'd one, because it endures the Fire ; it has indeed a fix'd oily Salt, and fix'd Salts, as well as Oils of the volatile Kind, do communicate a lasting Effect on the Vessels and Blood ; they are not carry'd, or rather hurry'd out of the Vessels, as volatile Salts are ; and if we receive any Advantage by its Use, we don't lose it so soon : It is certain the volatile Oil in the Coffee is Cordial, and when we drink it, we find ourselves suddenly refresh'd by it : If Coffee stands any Time, or has been long roasted, it loses this refreshing Force, and tastes pall'd and dead ; so that it has a fix'd Salt, and a volatile Oil in it ; both of which have their different Effects ; the Salt proves Diuretick ; and the Oil, Cordial : If People then should be oblig'd to have Recourse to the Roasters of Coffee for all they use, and could have none raw, to roast at Pleasure, and to have fresh and fresh, Coffee would not be of use : I therefore insist upon it as certain, that Coffee that has been long roasted and expos'd, is not properly Coffee ;
and

and how much this is the Case at present, may be known from the following Account : You can have no Coffee now, but what is roasted at the publick Roasting-Houses ; they roast so much as they judge proper to serve Customers : Now it may happen, that what they roast may not meet with sudden Disposál ; this is kept there, or at the Coffee-Houses, till this fine Oil flies off, and then the Coffee is almost useless, or, at least, has lost its most agreeable Parts ; it is not at all refreshing, but has a smoaky, disagreeable Taste, which Smoakiness is a certain Sign of the few Remains of the Oil it took its Pertness from. This is the true State of our Coffee-House Coffee, and, indeed, in Proportion of all other Coffee whatever ; I therefore advise all those, who might heretofore have expected any Advantage from Coffee, now to forbear its Use : The Taxes upon this Drug secure the Revenue, but the Method spoils and robs the Coffee of its main Virtue, and renders it almost useless. If truly roasted, it is said to abate Venery ; but this is understood of its Abuse, because it is drying if it be us'd with Excess ; that is, it carries Humours off by Urine, and consequently dries the Blood, and hurts the Secretion of the Seminal Matter ; doubtless this Matter is not so thick when secreted, as it is in the Bladders that hold it ; for these being a Repository for this Matter, the same happens here as in the Stomach ; that is, the Matter is thin when it is first separated from the Blood ; but in Process of

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Time, and by staying and resting for some time in the Bladders, it grows of a thickish Consistence : If then Coffee be plentifully drank of, the Blood itself grows thick, and the Secretion of this subtile Matter is hinder'd, and then it is said they are of a dry Constitution. Thus is it said of *Camphire*, that it is a Destroyer of the Seed, because, by taking too much of it, it drains the Blood, and destroys the Venereal Appetite, inasmuch as it thickens the Blood, and then no Matter is brought to the Secretory Ducts, and consequently there can be no Appetite, nor any Performance ; but then Men must peremptorily and obstinately insist on its Use to make it have this Effect, because a moderate Use of it will rather promote this Affair, but a great deal will certainly have the Effects I have just now explain'd : As it is of so moveable a Nature, it may easily be determin'd with what Constitutions it best agrees ; the Plump may use it freely, but the Lean not at all ; the cold Habits bear it, but the hectical or warm must forbear it ; because Fat depends on the oily Parts of the Blood moving gently forward, but the Lean on the Salts hurrying the Juices rapidly on ; in the first Case, the slow Motion gives Leisure for Parts to unite together ; but in the latter, whilst very many thin Particles arrive so frequently at the Mouths of the Glands, they have many Chances to be separated from it, and be thrown out of it, which those that move slowly have not, and are therefore detain'd,

tain'd, and unite and settle in proper Cells : Moreover, Salts are raking, and do shave off Part of the Substance of the Vessels, and make Leanness ; but Fat is smooth and light, and does not give the Vessels any Twinges, nor does it move therefore fast forwards, but stops and clings close to the small Ramifications and Branches : The Stomachs of lean People no sooner receive a Dish or two of Coffee into them, than they communicate its Effects to the whole System of the Nerves, and, as if the Strings of a musical Instrument were touch'd, they all begin to tremble ; for the volatile Parts of it stimulate the Membranes of the Stomach, and they have an immediate Connexion with the Nerves, all Membranes being suppos'd only an Expansion of Nerves, so that the general Alarm is given. As *Coffee* therefore is so generally in use, as well as *Tea* and *Chocolate*, I shall descend to as many Particulars about them all, as may give full Directions to the Drinkers of them, that they may take them without Prejudice to their Healths ; and I hope my Readers will thank me for the Care of setting them right, in the Use of Drinking a Liquor so universally in vogue. I shall endeavour, as much as in me lies, to avoid the Jargon of the Schools in the Descant I shall make on these Drugs, because I would endeavour to be plain and easily understood by all ; and as I must speak of their Qualities, I shall establish some Principles by which they operate ; but shall con-

fine myself, as far as possible, to Experience and Facts, which are, as a certain Judge us'd to say, stubborn Witnesses. If you make a Comparifon between Coffee and Wine, it may be said to be cold, because it has not so many active Parts, and does not inflame so much ; yet, if, on the Reverse, you compare it with Water, or to Vinegar, or Lemons in Water, we may justly say it is hot, because it makes the Water so bitter, and gives it a Pungency ; and then we find it puts the Blood into Heats and Hurries, which watry Liquors and Sherbets can't do ; and moreover, besides the active Parts it has, the actual Heat given to Coffee gives it an additional Motion for some time ; this Heat has sudden and extensive Effects, as may be seen in Experiments ; so Wormwood infus'd cold in Water, will not turn black with Steel or its Tincture for some Time ; but if you infuse the Wormwood in warm Water, and pour in the Steel or Tincture, it turns black immediately : Coffee drank by phlegmatick Constitutions, proves warming and attenuating to them, because it gives a brisk Motion to their circulating Juices, which was hinder'd to run freely forward, by reason of their Viscosities, and renders them more subtile and thin ; but if it be given to warm Constitutions, it may be esteem'd cool respectively, inasmuch as it adds not much Hurry to the Blood, already too rapidly mov'd and heated ; for the Water with which it is made, tempers that Violence which it would give by its Bitterness :

Bitterness : In Effect, whatever heating is given in any the least Degree, must add more, and can never fail of being prejudicial to hot Cases ; but I mean after it is roasted, for the Fire gives it a new Model ; the viscous, watry Parts exhale, and leave behind them the fix'd Salts, and volatile Oils and Salts ; as in the distilling of Hartshorn, the Phlegm arises first, and leaves the volatile Parts to ascend afterwards, so happens it in this Case ; the Reason of the first Appearance, is, because the Bones detain the volatile Parts in their Cells, but the watry are light and disengag'd, and therefore fly off soon ; in like manner is it with Coffee-Berries, the watry Parts fly off soon, but leave the volatile Parts in the hard Cells of the Berry, which are exalted and freed from other Parts, and which, with the Impression receiv'd from the Fire, become biting and subtle ; but as this Roasting is done by a moderate Degree of Fire, and that there yet remain earthy Parts enough to hinder the Action of these volatile ones, they must be of a warming Nature, but not excessively such. From what has been said it need not be wonder'd, if the Faculty have differ'd in Opinion about Coffee ; few have examin'd nicely enough into this Affair, and most content themselves with any Opinion they meet with in Authors, who have themselves taken no Pains about the Matter ; and this is the Case at present : Without, however, examining deep into this Affair, they find, that Coffee, being roasted, communicates
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to Water a Bitterness by boiling, and therefore a drying Taste, and Property; which will be so much the more perceptible, as this Liquor being known by all that drink it, to be somewhat diuretick, and by carrying some of the Serosities off from the Blood, by Consequence it must dry it. However, this drying Property is not excessive, since we avoid taking the driest Coffee, and it is infus'd and boil'd in Water: If the Coffee is taken more out of a Motive of Health, than Wantonness, and the Patient has no Physician by him, to direct him about the Effects of it, I hope he may have Recourse to this Account, and it will prove satisfactory to him, because I shall now enter upon all Particulars that I have observ'd relating to this Subject, and shall advise its Use, where I have found it useful, and give Cautions against it, where I have found it dangerous. In order to this Affair, I shall give you a strict Account what Principles it contains, that our Reasoning may proceed upon a sure Footing. A certain Quantity of this Drug was put into a Retort of Glass, well luted, a Recipient was fitted to it, and all was well luted; the Fire was lighted, and increas'd by Degrees; the Phlegm ascended clear as Water, then came up Vapours that condens'd into a reddish Liquor, which, as the Work went on and advanc'd, grew thicker and heavier, as well as blacker, and went to the Bottom; and thus all was over in eight or nine Hours. We found in the Recipient of Spirit, Phlegm, Oil, and
Earth

Earth in the Retort, three Parts in four of what was put in; the Oil was, when cold, black and buttery, at Top were the Spirit and Phlegm: The Butter, upon rectifying or distilling over again, became clear and transparent, but yellow. The Earth, in the Retort, afforded a fix'd Salt upon Calcination, resembling Salt of Tartar; the Phlegm was charg'd with volatile Salt, as might be judg'd by its hot and pungent Taste; and, as is usual, the Salt is always dissolv'd in the Phlegm when the Body affords Water, and the driest always gives out no less than a twentieth Part, at least. The Yellowness of the Spirit depends on the Oil join'd to it: This was all it afforded. From this Experiment may be deduc'd all the Properties that Coffee is known to have; and we shall, upon these Principles, account for all its known Effects: When one knows that Coffee is fill'd with volatile Salts and Oils, as we have seen by the Separation of its Principles, we need not be surpriz'd that it nourishes, and hinders us from sleeping; we shall find the Reason of both, because the close Union of the volatile Salt with the Oil, which the Warmth of the Country where it grows, gives to it, fit it, the one by its Activity, and the other by its adhering close to the Vessels, for hindering Sleep, and furnishing Nourishment. The Oil being cohesive and apt to stop, being assisted by the volatile Salt, which is a sort of Vehicle for it, is very proper for nourishing, and rarefying the

the Humours, and supplying the Brain with animal Spirits, that by their brisk Motion keep us awake. It is this volatile Salt that acts within us, that has given Rise to that Affertion, that it dries up the *Semen*, and makes us effeminate. It is very aperient by these volatile Salts it contains ; it strengthens the Stomach, dries up Moistures, is opening, keeps us awake, and hinders Defluxions ; but as the first Place it touches is the Mouth and Stomach, it ought to be observ'd, that the Coffee Powder is good to rub the Teeth, and it makes them very clean by rubbing them well with it, and washing with Water afterwards ; and for the Stomach, it is certain that it helps Digestion wonderfully ; as soon as it enters it, the Spirits of the Coffee are separated, enter into the Vessels, move the Blood with a gentle Swiftnefs, and digest our Vic-tuals into good Chyle, whose gross Parts it agitates and divides, and helps it to be carry'd into the Vessels of a good Consistence, and so it is render'd fit to nourish all the Parts. If our Chyle is not good, our Blood and Spirits are never good ; and if it be perfectly concocted, the Blood and all secreted Humours will be so, and the Body will be nourish'd ; it being compos'd of such volatile Parts, it necessarily takes off all excessive Acidities of the Stomach, and its earthy Parts serve to corroborate the Fibres of it ; both the volatile and earthy Parts act jointly in consuming and absorbing the Moisture that exceeds in us : By
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these volatile Parts it resists Coagulations in the Blood, which are reputed by Physicians a most common Cause of Diseases, and from the same Parts, it pushes forward our Perspiration. Where People depend upon Herbage for their Diet, that is, of Lettice, Fruits, Pease, and the like, or upon unleaven'd Bread, as is much the Custom in the North, or upon four Liquors, as Lemonade, and such other small Things, then Coffee is an excellent Remedy against these frippery and windy Things, because it twinges the Stomach, and excites a Motion in the Victuals, and corrects the Sliminess of this Diet, and abates the Acidity of the Humours. It sometimes also carries these slimy Humours downwards, and upwards too, or, however, it melts down all that tough Slime which hinders Digestion, and causes it to pass off from the Stomach ; thus, by Accident, Coffee may vomit or purge, to wit, when there is a large Quantity of this glewy Substance, but ordinarily it curbs any Inclination to vomit, which proceeds often from sharp and corrosive Acids in the Stomach ; because it sweetens them by its volatile Salts, and sheathes them by its Oil : It is good to hinder Worms from breeding, because it takes off their Nest of Indigestion, and because it is too bitter for these Animals to bear, for they like nothing but what is sweet and smooth. As it has been prov'd to be proper against Crudities and Indigestion, and to melt down the glassy Phlegm there, which often causes the
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Colick, and to dissolve, gradually, all such viscous Humours as obstruct the small Vessels of the Liver, the Spleen, and the Pancreas or Sweetbread; it is for this Reason that we advise its Use against phlegmatick Habits of Body, and to Girls troubled with Obstructions, many of which have been cur'd of their Suppression of the Months by this Liquor; and as we plainly perceive by distilling it, that it contains volatile Salts, we need not be surpriz'd that it is capable of correcting all four Leaven in the Blood, to drain it of its superfluous Moisture, to give to the grossest Humours, Motion, and to attenuate them so as to be able to pass through the ordinary Outlets of the Kidneys and Pores: We may conclude from thence, that it ought also to be very good to procure the monthly Flux, as I have said, because Experience does daily prove it. The Inhabitants where it grows, use it for this End, and succeed in the Attempt. As for the rest, as the greatest part of Womens Diseases depend on this natural Discharge, it may be presum'd that Coffee correcting the Irregularity of this one Discharge, may be beneficial to most other Disorders of Women. The Vapours, or Hystericks, which are caus'd by an irregular Motion of the animal Fluid running into the Parts by an acid pricking the Nerves, and exciting Tumults, are calm'd by volatile Salts, and therefore by Coffee: It must then be true, that it will be of Advantage to
such

such Women as during the Season of their menstrual Flux, have violent Pains ; because it abates any Acidity that nearly corrodes the Parts : It is so safe, that Women, who are lying in, need not be afraid of taking now and then a Dish to refresh their Spirits, and this is known, by Experience, to comfort them, and recruit their Spirits : It helps those also who have any Irregularity in their Urine ; for by its volatile Salt it revives and nourishes the natural Heat, and opens powerfully all the Parts thro' which it passes ; it exalts and softens the ill Juices of the Intestines, and forwards the Digestion, and, by this Means, it brings to a high Perfection, our natural OEconomy : It is, doubtless, owing to the frequent Use of this Liquor, thar we are not now so much troubled with the Dropfy, as we were heretofore ; for as we drank more Wine, and no Coffee, we were sorely troubled with it, but now we divide our Diversion, and carry off our Debauches by Sobriety and Coffee. All Nations feel the good Effects of Coffee in the Gout, the Scurvy, and hypochondriack Disease ; and we need not be surpriz'd at it, since these Humours are reputed by all to proceed from a tartareous, acid, and corrosive Blood, which want to be sweeten'd by such a wholesome volatile Salt : And it is well known, that all Antiscorbuticks, such as Scurvygrass, Cres-fes, and the like, do extremely abound in a volatile Salt. The Gravel is carry'd off by Diureticks, and Coffee therefore is excellent
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against it, whether it be, that the Matter of the Gravel is furnish'd by the Stomach, or from the Blood; this Liquor, that corrects the vitiated Digestion of the one, and that purifies the other, cannot fail of being proper for preventing Fits of the Gout and Scurvy, which are two great Diseases we are subject to. We have known some, who were of a full Habit of Body, who have been gouty for many Years, take to drinking Coffee, and have thereby staid off their Fits by Temperance, and it; for by abating their Fat, it carries off the Redundance of Humours by Stool or Urine. I have heard some acknowledge, that since their Use of it, they have had no Gout for two or three Years together, which before they us'd never to want every half Year, and that the Fits they had were severer than after the Use of it; which would convince us, that a Fit of the Gout depends on a certain Quantity of deprav'd Humours, which are carry'd off by Coffee. It is certain, that sedentary Persons ought to indulge in Coffee, because sitting disposes the Blood to stand still, and the Posture retards the Blood's Motion to the Legs; and as it consists of volatile Salts, it necessarily promotes the regular Circulation. What I have said is sufficient to convince us of the Truth of its being good in the Gout especially, because they who drink only Coffee, and not strong Liquors, seldom or ever are troubled with the Gravel or Stone, the Gout or Dropfy. One thing observable of
Coffee

Coffee, is, that it is useful against a certain Flux of the Belly, which is occasion'd, I mean, by Fruits and other frippery Diet; for, by taking three or four Dishes a Day, it corrects the Crudities which are the original Cause of these Fluxes: The whole Mass of Blood passing through the Lungs, by Virtue of the Circulation, it is impossible for the Blood to be under any ill State, but the Lungs will feel the ill Effects of it; for this Reason, if the Blood be loaden with glewy Humours, or with too much Moisture, it stops in the Glands of the Lungs, and is separated there, and occasions a Cough, short Breath, and an Oppression; and therefore, in these Cases, Coffee is of great Use: We often have order'd it, with Success, to be drank by Persons who are asthmatical, and who are us'd to spit much. It has been known, that some who have been oblig'd to spit and cough continually, have receiv'd Benefit by it, and have procur'd to themselves a good Digestion, and good Blood; for having attenuated the Viscid that was in the Juices, no glewy Matter was generated: It therefore strengthens the Voice, and must be good for such as have Occasion to speak in publick, and many such have experienc'd the Good of it, if just before they begin their Speech or Sermons, they take a Dish or two of fresh and well-made Coffee; or, if they are dispirited afterwards, they need only take a Dish or two, and they will find themselves refresh'd. They who have

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over-studied themselves, as is often the Case of laborious and industrious Men, and have thereby exhausted their Spirits, so that they seem to remember nothing, nor to have any Spirits left, either to speak or think, if they take a Dish or two of fresh and good Coffee, they recover their Spirits in such a Manner, as to recover all their Notions afresh, and, if their Affairs require Haste, may fall to Study afresh, as if they had not at all been confus'd: This, Divines, Mathematicians, and Lawyers especially, do frequently experience; their Affairs do sometimes require a severe Application, and a continu'd Connexion of Thought, which the Hours they are limited to, obliges them to apply a long Time at once; and as it is impossible for the Brain to supply Ideas for so long together, it becomes necessary to call in auxiliary Spirits, which the Coffee is certainly found to give them. In Cases of the Breast, it is common to use it along with Milk, but this is only to be us'd in hectic Cases, where they have few Spirits, but have a sharp Blood; the Milk tempers and corrects the sharp Humours, and the Coffee supplies their Spirits: If you boil the Coffee in Milk it self, it will be the better in all consumptive Cases with weak Spirits, because you will the more easily correct the sharp Juices, and equally recruit the animal Spirits, too much weaken'd by the excessive Perspiration. Milk, thus prepar'd, does not curdle in the Stomach, nor consequently occasion those Obstructions, which

which it usually, and otherwise, is apt to do ; nor does it make the Head ach, as Milk commonly does ; but it smooths the Acrimony of the Humours, calms all Commotions, helps the Cough, nourishes and fattens the Diseas'd. They who can't bear Milk any other way, can take it thus : It has been known, that a Person who had been ill of a Pleurisy, and who, after it, was harass'd with a violent and troublesome Cough, a hectic Heat, and a very frequent Pulse, with an universal Dryness, so that there was Room enough to suspect, that a Consumption was about to ensue ; for which Reason it was judg'd proper to prepare the Patient for drinking Ass's Milk : After they had drank it for a Month very regularly, without Success, the Pulse being still quick, the Cough not at all abated, but the Spitting more in Quantity ; and, moreover, yellowish and green, always complaining of Heats and Loads at their Breast, notwithstanding an exact Regimen ; and, perceiving the Milk to be useless, they took Milk Coffee, to a Quart a Day for six Weeks, by way of Experiment. This Liquor became so useful, that first some of the Symptoms abated, and in eight Days they recover'd to a Miracle, their Appetite return'd, and they grew fatter than they were before ; insomuch that their Acquaintances, who had not seen them for some Time, but had heard that they were out of Order, when they saluted their Friend, who had been in so much Danger, told them, they would have believ'd

they had only got a Defluxion upon their Jaws, that had puff'd them up. The Method of preventing the Coffee from turning into Grumes with Milk, is, by taking a little Milk and gently boiling it, and then mixing a good deal of Coffee with it, mix them well together, and then it mixes with the rest of the Milk with Ease. If the Coffee be too high roasted, it gives the Milk an uncouth Taste; this ought to be observ'd, otherwise the Patient can't take it. This Manner of giving Coffee is exceeding good against Pains in the Stomach, proceeding from an Acidity, and to prevent their Returns: It is easy enough to know why the Coffee does not curdle the Milk, since you have seen that it affords a good deal of a volatile Salt, and Acids alone have this Effect upon Milk. Salt Armoniack hinders Coagulation if it be mix'd with Milk, and the Sugar which we add, does also hinder its curdling; for this Reason it would do well to make Coffee with Milk and Lime-Water together, because then it would hinder a Curdling effectually, and would continue to remedy bloody Fluxes, and Diseases of the Breast, which the Milk alone cannot effect, without this or some other like Corrective: Milk need not always be boil'd with the Coffee; there are some Cases where it were better not to do it, because then the Milk would not grow thick. In the Room of this, if the Physician see Cause, you may boil the Coffee in Water, as usual, and then you may mingle a
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good deal of Milk with it, because so as they mix in the Stomach, it is not of great Importance in what Manner it is taken : Experience shews this to be true ; each may chuse their own Inclination ; however, in all Appearance, this Mixture is less agreeable to Nature, than when the Milk and Coffee are boil'd together, for then it is thicken'd a little, and it approaches to a sort of Chocolate, which all agree to be good in consumptive Cases. We may boil As's Milk instead of Cow's Milk : Bitters mix well with Milk, and agree with it. If Persons troubled with slow Fevers are attack'd with a Drowsiness, from Humours seizing on the Brain, or with Pains there, a little Coffee is allowable to disperse those Humours, and to carry them off by Urine ; and even in the Fit, a Dish of Coffee may be allow'd to change the Course of the Humours into the urinary Ducts ; and it has been known, that a Person of a nice Constitution, and of a dry Habit, who had several Fits of an intermitting Fever, did affirm, that the extreme Uneasiness, during the Fit, was much abated whenever they took a Dish of Coffee at the Entrance of the Fever ; it made the Heat much less than when they did not drink it ; and whereas some complain of great Coldness in Fevers, and others are too cautious in giving very warm Remedies ; a Dish of Coffee can be complain'd of by neither Party, if drank very hot ; and this Liquor, thus drank, does not only soothe the violent Anguish that such

Persons suffer during the cold Fit, but it even has been known to cure some so perfectly, that, taken at the Beginning of the Fit, whenever it first seiz'd them, and continuing so to do for some Time, the Fits, at last, return'd no more at all: And where the Matter of these Agues is not in great Quantity, a small Number of Dishes at proper Distances will serve the Turn, and will so help the Digestion, as to correct the Remainder of the Deprav'd, that they can't rise into a Fit. Thus did a certain Man of Skill treat himself, who was attack'd with an intermitting Fever, which made him neauseate both Victuals and Drugs; Bleeding and Physick had been repeated till he determin'd to take no more, come what would; he had a liking to Coffee, and knew it digested Crudities in the Stomach and Blood, and took off Viscidities, and fancying his Blood was too viscid, he betook himself to Coffee, as a Diet, as well as for a Remedy, he believing the Intermission was the properest Time for taking it, and he stuck close to it: He was not out of his Conjectures, for it reliev'd, and then cur'd him, or, however, the Fever ceas'd to return, and all the World will repute that Remedy to have the Reputation of curing, which being administer'd, makes the Disease to cease. Coffee has been long noted for Disorders of the Head, for it very readily recruits, by its volatile and oily Parts, the animal Spirits, and Head-aches, which depend on Disorders in our digestive Faculty, that

that depend on Viscosities, and Grossness of the Juices ; for where the Membranes are inflam'd, the quick Motion it communicates to the Blood, would be much heighten'd by Coffee, and would drive the Takers of it into a Frenzy, or a Madness ; neither can it be of any Advantage to such Head-aches as proceed from Membranes too elastick and sensible of the least Acrimony, because the Use of it would then add Acrimony to Acrimony, and would, probably, throw the Drinkers of it into strong Convulsions ; nor is it convenient where there is the least Suspicion of an actual Inflammation, because once a Part is so obstructed, as to check the Course of the Circulation, we must give volatile Medicines with a sparing, or a skilful Hand. In fine, it is best given in Head-aches, which are call'd *sympathetical*, that is, in those whose Cases don't lodge in the Head. The Custom that many have of holding their Eyes over the Steams of hot Coffee, is neither ridiculous nor useless ; for, where-ever the Eye-lids are inflam'd, or Blood-shot ; these Steams being watry and volatile, are a sort of Fomentation apply'd to them ; and as these are useful to disperse impacted Humours, and are surely and constantly made use of by Surgeons for that End, this Vapour is but a Species of them, and in Eyes Blood-shot and gumm'd up, it is certainly commendable : And this Custom extends it self to Disorders of the Ears ; for if Wax becomes too hard, and Deafness arises

from thence, the Steams of Coffee will set the Wax free, and will relieve such Complainers. How it produces its Effects in the Brain in keeping us awake, may be explain'd in the following Manner; Sleep causes all our Senses, internal and external, to cease, all voluntary Motion also ceases; only the Arteries beat, and the Lungs move. Now as voluntary Motion ceases, and the Circulation continues, Rest and Weariness are the two Causes of Sleep; therefore the contrary must be the Cause of Watching: If Sleep then depends on the Passage of the Blood through the Brain, if then it does not freely pass through the cortical Part, and don't separate animal Spirits, there will be a want of them, or what Quantity is separated lies quiet in the Brain, and is not detach'd into the Organs of Sense and Motion, till at last they break forth, and cause us to awake. If then Coffee be of a moveable Nature, it won't fail to stimulate the Brain, and occasion Excursions of animal Spirits, and will consequently keep us awake. This Account does not carry any Paradox with it, but that Coffee should have a very different Effect, and, instead of keeping us awake, makes us sleep, seems somewhat surprizing; but is readily to be accounted for, by searching into its Cause; for if it takes away the Cause of Sleep against Nature, and is therefore proper and useful for taking off all lethargick Dispositions, but does not disturb natural Rest, it must follow of Course, that it causes

causes us to sleep or watch, according to the Causes it corrects within us ; and, upon this Head it happens, that such as have any Disease upon them, that hinders their Rest, and which Coffee is good for, by helping the Disease, it removes the Cause of Watching, and gives Rest : However, this is no natural Effect of Coffee, for, ordinarily, it takes away their Sleep ; and they who have a Mind to watch, do often take it to keep them awake : It is reasonable to believe, that the Bitterness of the Coffee, and the actual Heat of the Liquor, do contribute to attenuate the Viscosities, and keep the Spirits moving, and so do all that is necessary to keep us awake.

Hitherto I have shewn you the Advantages to be reap'd by Coffee ; I shall, in as few Words as the Nature of the Thing will bear, shew you the Damages we receive by Coffee ; for as nothing can be of Advantage to Health, but the same, if us'd to ill Purpose, or wrong administer'd, may do us Prejudice ; and my Province not being to write Panegyrics, but Facts ; I am oblig'd to warn you against its Use, where I have found it hurtful. The Constitutions of all must be duly weigh'd, or the best of Drugs will be employ'd to ill Purposes : Some Hysterical Women will bear, and their Case often requires, a Purgative ; yet if you give to one Manna, to another Sena, to a third Rheubarb, and to a fourth Cream of Tartar, their Stomachs are drawn into Convulsions and Throws, because they have
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a natural Aversion for such Drugs : This single Article always bears an Exception ; so that however good Coffee may be for the Disease such a Person struggles under, it must not be ventur'd on at all, for fear of the Harm it will do ; it is a very unhappy Constitution, that can't bear all that is proper for them : Suppose any one to have an Aversion, I mean a real, not an imaginary one, or a common Prejudice, to the Jesuit's Bark, and they labour under a stubborn Ague, that does not give way to other Remedies, the Condition of this Person is miserable ; or suppose a Man is full of Anguish and Pain, which gives no Respite, and which would allow a Truce by *Opium*, but the Diseas'd has an utter Aversion to it, that is, it has always been experienc'd to throw him into long Swoons or into Convulsions, this poor Creature has not Spirits to hold out till the original Cause be taken off, what must befall him but Death ? In like Manner I say of Coffee, let it be ever so Sovereign, against any Disease you have upon you, and you have a natural Antipathy against it ; that is, it throws you into violent Vomittings, or the like ; I would not advise you to meddle with it. In order to advise you against its Use, in some Cases, we must repeat, or, at least, remind you of what has been said of its Ingredients, or Principles, that enter into its Composition, and the Diseases it remedies ; where then the Body is in an opposite State to that which it is found to relieve, it must necessarily

cessarily be dangerous : For Example, I have shew'd above, that Persons of a viscid and phlegmatick State of Blood, require Coffee to take off the Grossness of their Juices, and to cure Disorders from thence, for as this Grossness disposes them to digest too slowly, and to make their Blood stand still, and creates white Swellings within and without, and many such like Diseases ; now it must follow, that where the Blood and Juices are too thin, and the Digestion is too hastily perform'd, and the Patients are of a warm Constitution, that Coffee will, in these Cases, be prejudicial ; for as it opens, heats, attenuates and disperses Viscidities, it must necessarily follow, that it cannot fail to do harm to such Persons : If, for Example, a Person under this Habit spits Blood, because the Arteries are full of a corrosive Humour, Coffee will only open the Artery more, and make the Patient spit out his Life. Suppose again, Coffee helps to melt down those gross Humours that contribute to fatten us, when we are lean, and it happens because there are Inflammations, Obstructions in the Bowels, or because we digest too high into a sort of Putrefaction it self ; we must forbear Coffee, because it encreases Inflammations and digests too high : It fattens them according to the State of Blood reigning : it will fatten those whose Blood is too viscid, and make those lean whose Blood is too hot ; it fattens the lean, and makes lean the fat Folks, according as it is drank. But what may reasonably

reasonably be ask'd before we use it, is, if it will do Good or Harm, if it will fatten or make lean the Person that is going to make a plentiful Use of it. To this, I say, you must be enabled to answer these Questions by the Knowledge of the Constitution alone. Upon which we must take a View of such as use it in a plentiful Manner, and such as drink little or no other Liquor : They who most commonly drink of it, are fat, jolly, fresh-colour'd, and healthful ; and they who drink stronger Liquors, especially Brandy, are lean, cholerick, yellow and unwholesome. They whose Blood is too plentiful, and too thin, should not drink it ; they who from a rarefy'd Blood have any Distempers in the Breast, should avoid its Use, for fear it expand the Lungs, and tear them. It has been known, that Consumptions have been totally advanc'd by drinking excessively of it, because in this Disease the Lungs are greatly obstructed and inflam'd ; and Coffee, consisting of moving and active Parts, after roasting, is so far from opening those obstructed Glands, that it carries too much Blood that way, and fills and bloats the Lungs up, and endangers a Breach of the Vessels, instead of opening ; and besides, as Consumptions tend towards an Ulcer, and that is done by giving an intestine Motion to Liquors that nearly stand still, and swell the Fibres that hold them till they burst, this would be the Case by drinking Coffee ; for, as I have plainly shew'd, that it

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has volatile Parts, and does these, by briskly moving the Blood forward, where it won't budge, as it will not at such a Bar as obstructed Glands are, then these Vessels, which have Glands at their Ends, must be stretch'd in Breadth, and even stretch'd till they break, or turn into an Abscess, and that is a confirm'd Consumption, which few, if any, do ever survive; Inflammations then, Coffee is no Friend to, unless to such as you wish to break soon, and there are many of that Kind; for Example, suppose you have a Patient that has been sick of a malignant or pestilential Fever, and the Fever turns into a Swelling, which inflames; this Swelling being *critical*, as Physicians call it, or useful to carry the Fever out of the Blood, it should be encourag'd, and broke as soon as may be; then drinking Coffee is of Use to put the Blood into Motion, and consequently the Humours lodg'd in the Swelling, and this Motion, hasten its turning into Matter, and help to break it. The Inhabitants of *Turky*, who often experience Plagues and Buboes, are good Judges of this Affair; or suppose a Pox would terminate in a Bubo, and 'tis a Necessity upon a Surgeon to ripen it, his Method generally in this Circumstance, is to make the Patient eat and drink warming Diet and Liquors, amongst which, Coffee is good; but in all inward Inflammations it must, of Course, be very bad, because these are never to be broke, but dispers'd, if possible: None are safe to break,
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but the least Prejudice enfues from Abscesses in the Bowels, or Channel of the Stomach and Guts, and in an Inflammation of the Sides and Lungs ; however, who would chuse such a Chance, if it could be avoided by low Diet, and plentiful Bleeding ? So much depends upon Coffee, and so much good may be done by it, if it be good, and rightly prepar'd, that I shall just observe how to chuse it, and to prepare it, and leave House-keepers to make Use of it, according to the Circumstances I have mention'd. As to its Choice, we must take the plumpest, the heaviest, the yellowest ; it must be free from any Mixture, and the freshest is best. As to the Roasting, this being the main Part, Care should be taken not to burn it, and that is ordinarily the Case with the common Roasters ; for then it is of no Use, and if it be not roasted enough, there is too much Phlegm in it, and then it is of no Use neither : It must be put into a Box, which has the Form of a Spit at each End, and turn'd round till it becomes of a very dark brown Colour, and smells like burnt Crust, and then it must be kept close from the Air, or the volatile Part flies off, and renders it useless. This is the very Case of the Venders of roasted Coffee ; they are oblig'd to parcel it out, and to expose it often to the Air ; and thus do we ordinarily drink it at the Coffee-Houses : Its Smell gives all the Life it has, and that once lost, it is almost useless, at least as to that refreshing Quality it is so famous

famous for: It ought never to be kept in Powder, for then the Surface being larger, the Air evaporates more of that fine Steam it has, and it becomes a mere *Caput mortuum*, or a Lump of Earth, fit for nothing but Fluxes, and apt to obstruct the Vessels. To arrive at an Exactness of Roasting, the Degree of Fire must be measur'd, and the Nearness of the Box to the Fire must be observ'd; and, lastly, the Time must be measur'd by a Minute-Watch: Whenever then you have a Mind to be exact, these must be nicely observ'd as a Standard. I hope this full Account of the Good and Harm of Coffee will be agreeable to all those that use this Liquor, that is, to all Housekeepers whatsoever, since there is no Family, of any Account, that will not have Occasion to consult how far this Liquor will serve their Turn, or ought to be rejected.

Wine; Of this there are many Kinds, whose Virtues do agree in one Particular, but disagree in as many as there are Wines in other Particulars; so all Wines will heat and inflame, but some are pectoral, others are gripping, others heady. Wine is, indeed, hotter than Coffee, and a much smaller Quantity will heat us, than of Coffee, and it gives other Qualities of Fuddling, and making our Heads heavy. These two Properties, to wit, of inebriating, and making us sleepy, are better known than accounted for: I shall descend to some Cases where Wine may do us Good or Harm, which is the Scope of these Sheets,
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that we may know when to use, and where to shun, most Things, that Mankind are oblig'd to live upon. All new Wines are laxative, and the newer they are, the more windy are they, because the oily Parts are not quite thinn'd enough, but are clogg'd with Tartar, and these blended together, are gross, and yet light, that is, the Sulphurs are irritating, and all that drink new Wines experience this Fault in them; they give the Drinkers Fluxes, which can't be cur'd without abstaining from them, and a strict Observance of Rules. They also cause Fevers by their entring the Blood, and carrying in a vast Quantity of active Parts, which are most readily thinn'd, but, like the *Trojan* Horse, are charg'd with Destruction: The white Wines are the soonest let loose in our Blood, and few drink of them that are not set on Fire by them immediately, but the Red do not so readily exert their Strength; for the earthy Parts in the Red do lock up the Spirits, and keep them from acting too suddenly. Old Wines, I mean moderately old, are warmest, because all the Earth in the Tartar subsides, and the Spirits do equally animate the Wine; whereas, if they be too old, they fly off, and the Wine turns into Vinegar. Rhenish is the least heating, but then it has too much Tartar, and is apt to gripe, and cause Diseases depending on an Acid, and, at present, is too much adulterated, nay, and with Drugs that are dangerous and destructive. These Gentlemen, forsooth, have no regard to your Health,

Health, they must vend their Commodity, and as it is apt to turn eager, and give Colicks ; they, by an Artifice, make it sweet again with Lead or Ceruss, and make it worse for your Bodies, than if it were drank sour as Vinegar. Sweet Wines, such as *Spanish, Canaries,* and others, do nourish the most, but then they can't be taken in any large Quantity, because they raise Tumults in your Stomach, and Disorders in your Head ; they are, in short, too viscous respectively, and heat and ferment in your Veins too much. The Heat they communicate by the Brandy they have in them, is not taken off by Discharges, as in more eager Wines it happens ; for there are few Wines that have any Picquancy in them, but they cause Urine plentifully ; and these sweet Wines wanting this Pungency in them, are detain'd, and serve to make us feverish and dry, to stick in our Heads, and the small Vessels every where. Small Wines are apt to hurt membranous Parts and Nerves, because the Picquancy depending upon an Acid, and Acids being apt to prick the Nerves, and render the nervous Juice thick, a Dependence on such Wines, for common Use, seldom fails of being hurtful. As Wines are sweet, they loosen and open the Belly : As they are binding or red, they bung and cork up the Bowels, and cause Obstructions ; which produce Dropsies, and stop the menstrual Flux, as well as others, internally and externally ; if they are sour, they gripe, and cause Colicks, and

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with Water refresh and cool us ; but all Wines are, of themselves, more or less inflaming.

Brandy is the heating Part of the Wine ; that taken off, the Wine is pall'd, and is mere musty Water, and a little Vinegar ; it is equal, in Effect, to so much Fire as there is Spirit, so that it thickens our Blood, if we take it plentifully, and if, in a proper Quantity, it truly serves as a Cordial. Excess must be avoided in all Kinds ; it does good outwardly, as a Fomentation, and the Surgeons may call it their right Hand, for nothing disperses Tumors better than it does. I know nothing more beneficial for lax and flabby Swellings, than a Mixture of Brandy, or rarefy'd Spirits of Wine and good Vinegar together, one Third of the latter to two Thirds of the former ; this Mixture us'd warm, disperses and corroborates, and does not only carry off the Humour lodg'd, but prevents an Influx of more, for Vinegar is of an interceptive, and the Spirit of a dispersing Nature. The cordial Virtue of the Brandy is so much overbalanc'd, at present, by the destructive Qualities, that I don't care to descend deeper into an Inquiry of it, because, to say it is not useful, upon many Occasions, would be false ; and, to say it is not at all dangerous would be too easy to be prov'd false also ; wherefore I shall leave it till a fitter Opportunity.

Thea ; this Plant agrees in most Things, as to its Effects, with Coffee ; it consists of some volatile Parts, as it appears by its Smell, and by Distillation ; it also consists of some fix'd Salts, as appears by burning it, and of a good deal of Earth : As its Leaves are soft, and the volatile Parts of it more disengag'd than those of Coffee, it sooner communicates its Virtues than Coffee does ; the Coffee must be boil'd, but Infusion draws out the Force of *Thea* ; so that, when infus'd, it acts nearly as Coffee does. *Thea* has no Virtues which we have not experienc'd very well, and it leaves very few ill Effects behind, but such as depend on its excessive Use, and on our own Mismanagement ; because it is a wholesome Liquor, and a good, as well as very agreeable Bitter ; and as its Taste is not lasting upon the Tongue, nor does it leave any Dryness upon it : It appears to be moderately warm in its Effects ; for it is neither so bitter as Coffee, nor so hot as Cloves, or any other Spices. Its Smell is refreshing, and more or less agreeable, as it partakes of the Berry, or Flower ; although its Bitter is useful, yet the Smell and Spirit of it is so nice, as not to be caught, or brought over in Distillation ; its Parts are too subtile to be kept in by any *Lute*, and yet a small Degree of Heat makes it communicate its Effects to Water. This is the Cause of those sudden Refreshments *Thea*-drinkers feel upon drinking it. The Quantity of Water we use in making it, is the Reason that the Bitter is

not so much felt, for if we pour not enough of Water, it is plainly a disagreeable nitrous Bitter. If what has been said above of Coffee be remember'd, concerning its keeping us awake, there is the very same Reason to conclude, that Thea will also keep us from sleeping, because if nimble Parts actuate the Blood, and open the Tubes of the Brain, and do therefore hinder us from falling asleep, it will hold good here, as in Coffee; only there is this Difference, that Coffee is stronger, and does it in a less Dose; and as Coffee does sometimes contribute to cause us sleep quietly, so does Thea, by taking away the Causes that hinder Sleep, many of which depend on a specifick Degree of Consistence of the Blood, which Thea rectifies: If it be us'd with Discretion it proves diuretick, and carries off Gravel; it gives fresh Vigour to the Spirits, it dries up Humours, and cures all those Diseases that depend on too much Moisture, such as Rheums on the Breast, and Defluxions any where; it restores a good Appetite, and is good in asthmatick Cases especially, if it be taken with Saffron Drops, which Chymists call Tincture of Saffron; Sleep then is driven off by it usually, because Sleep arises from two Causes, to wit, from an Exhaustion of Spirits, and from a slow Motion of the few that remain; by repairing the Spirits therefore, of which there are few or none left to perform muscular Motions, and this appears by an universal Inability; when we drink Thea in
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this Case, the Spirits are supply'd afresh, and enough are generated to serve to reinforce the Brain, and to renew all our Actions, which before were clouded or arrested; then do all our Senses, internal and external, return to their wonted Functions; the Guard is mounted, and all is again in Action; the Sun shines, and we have Day. The volatile and spirituous Parts of the Thea impair our animal Spirits, and the bitter Part carries off all other Impediments. Thea is of great Use in Cases of the Head, which depend on gross and viscous Humours, or upon Acids that prick our Membranes: This is granted by all, because Experience makes us wise in this Part; and, as some few Dishes of Thea take off a present Head-ach, it follows, that if it returns frequently, we have it in our Power to relieve and prevent it also. It is noted for helping forward Digestion, as all Bitters do; that is, where our Stomach is apt to make a Paste of our Victuals, and we swell after Meals, and where there are Crudities, which occasion several Disorders in the whole Body, depending on viscid Humours, then after Dinner is it proper to give some Dishes of Thea, and to continue its Use for some Time. Debauches are carried off by Thea, because it dilutes, and is diuretick, as also diaphoretick; and the Feverishness, as well as Fevers, are reliev'd by it. There is not any Bitter in Physick so agreeable as is that of Thea; there are some that are more effectual, because they are stronger, but, the

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134 *The Family Companion*

physical Plants ought to be stronger than what we depend on for Diet. As Thea is useful to take away Viscosities in the Blood, and so to do good to the Head, it follows then, that it contributes to make our Heads clear, and to strengthen our Memories; for a Brain too moist is too soft for taking Impressions, and retaining them: Hence is it that phlegmatick People and Infants have little or no Memory. There must be a standard Degree of Dryness in the Brain, and a certain Degree of Consistence in the Blood, to make way for Thought and Ideas, and Thea has this Effect upon Phlegmatics: This Virtue appears to be a natural Effect of Thea, because it dries up Defluxions, and drains off gross Humours; and they who drink it much, become sprightly: Whenever then People are subject to Defluxions on the Head, from Apoplexies, Lethargies and Palsies, from Serosities overloading the Vessels, then Thea us'd discreetly and jointly with proper Remedies, is extremely convenient; because, without other proper Assistance, nothing can be done in these great Cases. Let no one be surpriz'd that so gentle a Bitter infus'd in Water, should have so good Effects as have been imputed to it; let them only consider, that these diuretick Remedies do insensibly, and as surely, communicate their good Qualities, as Remedies out of an Apothecary's Shop; and they act without any Violence, nor do they weaken the Stomach like Physick; they don't exhaust

haust the Spirits like Bleeding or Vomits, nor do they nauseate the Patients like Drugs; and as most of our Diseases owe their Rise to an ill Management of the external Causes, it is certain that a Liquor so familiarly in Use, and at the same Time proper for a Distemper, will sooner relieve a Patient than any Medicine we can call into Use, because this is not so much us'd, nor is Nature so much accustomed to it. We are at no Loss to find how it is stomachick, and digests our Victuals, because it is almost settled as an Axiom, that Bitters are Stomach-Medicines: By this Bitterness it corrects all Acidities in the Stomach, and by its earthy Parts it strengthens it, and takes off that feeble Structure of the Coats, and, methinks, in this last Case, there should be a gentle Simmer given it, and that will make it give out its styptick Parts better. What if they who have a Sourness at Stomach endeavour to remedy it by chewing Thea, and swallow their Spittle, for then you would have both the bitter and earthy Parts? If our Digestion be good, our Blood and all our secreted Humours are laudable, we have no Colicks, nor Pains at Stomach, nor are we troubled with Winds nor Fluxes: Thea then, by helping that, cures these, or however, is found of Benefit in them. Gouts and Gravel are Children of Indigestion, and the early Use of this Drug has prevented such Numbers of both, that every Day will produce fewer. The actual Warmth contributes to make it enter readily

into the Vessels, and makes it attenuate readily. Gravel is caus'd by small Atoms of stony Matter gather'd together, and united by Viscosities in the Blood, and then these Concretions stick to the Kidneys, and more is added daily: There are few who have not the same stony Matter in their Veins; but then some are so discreet as to wash it down, for which Thea is one of the most famous: Hence it appears, that a discreet Use of Diureticks is convenient for the Gravel; but that too great Use of Thea will bring on a Diabetes, and a Debility of the spermatick Vessels, and that it is diuretick, you may know, for all sweet-scented Things are Forcers of Urine; inasmuch as being compos'd of Fire, and stimulating Parts, they attenuate and twitch the Ducts of Secretion. It is reputed good in vapourish Cases, because it is attenuating, and contrary to Acids, for Bitters sweeten acid Humours: Hence if Palpitations, or any Symptoms of Melancholy attack us, it equally relieves these Symptoms, as it does the original Disease, from whence they arise: We have not a more agreeable Liquor in Fevers than Thea, and they generally like it for quelling their insatiable Thirst. This Liquor is also good in Cases of the Breast, with Milk, so that in tickling Coughs, if it be infus'd in Milk instead of Water, it has a very good Effect in allaying those sharp Humours that infest the Passage of the Lungs, and which allow us no Rest, Night nor Day: If Children are thin
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and consumptive, tender and sickly, they ought to have their Milk boil'd with Thea Leaves in it, and gently sweeten'd ; this will fatten them, and open Obstructions, and also help to destroy the Nest of the Worms, if not the Worms themselves. Thus may we remedy Diseases with Diet, and, I believe, all the World will agree with me, that Remedies thus easy are to be wish'd for, since a Remedy that is nauseous, is often, as it were, a new Disease to a Patient : In spitting of Blood from Coughs, Thea boil'd in Milk is convenient, because the Milk, and the earthy Part of the Thea, which is communicated by boiling, do both contribute to soften the sharp Humours, and to close up the Orifice. This Liquor must also, upon the same Account, be good in bloody Fluxes, and others, because where there is Occasion to temper and sweeten Humours, to fortify and close up the Orifices, and to carry off the serous Parts elsewhere, this must not fail of being useful : However good Thea may be in the Cases I have nam'd, its Abuse is but too prejudicial to countenance it, and I can't but wonder to see some make so free with it, as to evaporate their Spirits, their necessary Quantity of Serum, and even to thicken the Blood with what should keep it thin, which its excessive drinking will not fail to do ; and thus that Drug, which I would chuse sooner than any Thing us'd in Diet, to open Obstructions, by abusing it, and taking it too plentifully, does
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the same Thing as the greatest Obstructor you can think of : Thus Morality and Physick jump together ; for what is a Vice in the former, is a Disease in the latter : Excess is vicious, Moderation adviseable.

Bath Water : This Liquor is now in Use, both at the Fountain and the Table, and it acts in both Cases alike, but is much stronger here than any where else ; I have certain Reasons to forbear any Panegyricks on it ; I shall barely recite what Advantages they who drink it in Town, and at a Distance, may expect from it ; and, far from being partial, I shall plainly tell you where it is hurtful, and both shall be done with the utmost Brevity, and in general. Dr. *Guidot*, Dr. *Oliver*, Dr. *Cheyne*, and all agree in the Sulphur it contains, and for the Steel, the Gall shews us it contains it ; but I am apt to believe there are other Ingredients in the Bath, of which no Notice is yet taken ; for how comes it to purge when taken in a larger Quantity, or to vomit those little us'd to it, if there were not some other Ingredients in it ? We can say what we find in it, but cannot answer, till further Trials, what we have not experienc'd : It is vastly surprizing, however, that the Gentlemen who always reside here, don't take a little more Pains about an Affair of such Moment. The small Time I have spent here these two Seasons past, have given me Hopes to give a much better Account of them than has hitherto been done, which shall, in a more convenient

nient Time, be publish'd, that is, when I have made Experiments enough to convince me, and all the Faculty how their Effects are produc'd. Do not they prevent Miscarriages, by other Principles or Ingredients than have been commonly detected in them hitherto? Are they useful against Scabs, and other Eruptions, from no other Ingredient than the Sulphur? Can they be of Use against an inveterate Flux, from the Steel alone? Do the Whites receive Benefit only from the Steel and Sulphur, or from other untry'd Compositions? Do they prevent beginning Dropsies, only because they corroborate a little, and attenuate? I must say, that the Resorters to the *Bath*, and the Inhabitants themselves, who follow the Trade of Healing, have hitherto acted too indolently on this Head. They may remember what a Father of Physick says upon this Subject; to wit, that the Virtues of *Bath* Waters are to be learn'd by Experience and Reason: Of the first there is no doubt but all the Physicians, who inhabit the *Bath*, are well vers'd in the Manner of giving them, and are pretty well assur'd of their Effects; but, for the reasoning Part, they have not taken the least Pains in it, that could be wish'd for. I can assure our young Men of the Faculty, that an intimate Knowledge in Chymistry is far from being so useless, as some, whose Ignorance in that Science have made them declaim against, even in accounting for most of what we know in Physick. Their Power of attenuating the
Juices,

Juices, and of curing chronical Cases, is undisputed ; they, however, are hurtful, where a Fever attends these Cases at certain Times ; as for Example, all may drink *Bath* Water with Profit, who have the Whites, Jaundice, Gravel, dropfical Swellings, Indigestions at Stomach, sour Vomitings, Hypochondriacks, Melancholy, Palsies, Lethargies, Drowfiness, wandering Pains, Scurvy, or, indeed, any Disease of standing ; but an Asthma is a lasting Case, and yet the *Bath* Waters, especially from the Pump, are improper for it, because a Fever often attacks Asthmatics, and *Bath* Waters are not at all convenient to be drunk in Fevers, especially such as attend an Asthma, I mean a Fever from an Inflammation ; unless it were a Fever from a *Vomica* become an Abscess, for Imposthumes must be broke, if no Danger ensues ; and Imposthumes in the Lungs are to be ripen'd and broke, to let out the Matter, and to hinder us from choaking ; neither are *Bath* Waters proper for Bleedings at any Part, because they thin the Blood, and make it escape at any Passage, therefore are they Death in Spittings of Blood ; and, to say the Truth, in most Cases of the Lungs, because where there are Inflammations, Asthma's, Defluxions, Consumptions, Tubercles or Blood in the Case, they heat and inflame the Parts, and raise Tumults, and swell them, and therefore straighten the Passages for Air, and do often produce Suffocations.

German Spa : We are to consider how this acts by the Steel in Vitriol, and by the Water ; there is a very small Proportion of the Salt of Steel to the Water, so that it acts more as Water than as Steel ; that is, it dilutes much, and compresses our Humours, and straightens our Vessels ; it has Effects upon our *Stomachs*, by creating an Appetite, and checking Vomitings ; on the *Bowels*, by opening Obstructions of the Mesentery, Pancreas, and Gall-Bladder ; on the *Blood*, by calming Hecticks, and hot Temperaments, by opening Obstructions gently, and by carrying off Gravel, as well as curbing Fluxes from the Vessels ; and on the *Nerves*, by helping Convulsions and Spasms ; and, on the other Hand, it heats *Stomachs* that are cold and phlegmatick ; it is prejudicial to watry and anasarcal Swellings ; it is dangerous for Nerves too tense.

Steel Waters are of two Sorts, namely, the *Inky* and the *Sour* ; the latter act as *German Spa*, but the former act as Steel ; the *Inky* are heavy, but the *Sour* are light ; the light act as *German Spa*, but the heavy are for cold Constitutions. If then you design to drink these Waters for Drink, it must be done with Advice : And my Business in these Sheets being to direct how to use common Meats and Drinks ; to give to those in Health, Directions what to eat or drink, as well as to the Diseas'd what to take or avoid in their Ailments ; I shall, in the Beginning of this Treatise, give Hints to avoid Diseases ; in the latter

ter End, to recover a sound Constitution when it is destroy'd.

Chocolate : If we were to consider the Nut alone, and if that only was what we drank, it were easy to determine its Virtue, for then we might pronounce it a mealy Liquor that's softning and fatning ; but the many Ingredients that enter into it, before it is fit for Use, give it another Turn, and we must examine its Virtues as a Compound, not as from the Kernel. They who make up this Compound, have no Knowledge in Physick ; they only study to gratify the Palates of the Drinkers of it, and have made a mere Jumble of it thereby ; for they mix it along with other mealy and pappy Things, as also with hot and aromatick Drugs, so that it is a Medly, whose Virtues can hardly be guess'd at. The hot is put to correct the viscous, and the viscous is to hinder the hot Spices from heating us too much ; by this they have render'd it a moderate Liquor that won't alter your Pulse, nor yet gripe you : The Liquor, however, is now establish'd by long Use, and as it is, we must tell you, in short, what we think of it : So far, we may say, that it gives us no Pains of our Head, but is nourishing and cordial, by affording oily and hot Parts ; it neither makes us drowsy, nor cools us ; it is not cold, but is mix'd up of pasty and aromatick Things : The Action of the viscous is not prejudicial, because the hot rarefies it ; and the Action of the hot Parts is not hurtful, because the
viscous

viscous arrests them ; Action and Re-action being equal, it becomes a temperate Liquor : One Thing is observable, namely, that the fresh Chocolate is not so good as that which has been kept for some Time, because there is too much of the Spices and Oil in the fresh, which do contribute to create a Loathing, and a Relaxation of the Stomach ; but Age takes off a good deal of this Quality : It ought then to be kept, at least, a Month, before it be us'd. As to the Benefit we are to expect from Chocolate, it may, in general, be advis'd, that where it agrees it ought to be continu'd ; but since Physick orders proper Diet for the Comfort of Mankind, I shall descend to some Particulars, where it does Good or Harm. As Chocolate therefore is compos'd of stomachick Drugs, it must be of Advantage where the Stomach is weaken'd by habitual Colicks, Fluxes, Flatus's, or Winds, or violent Discharges, because it being smooth and warming, it tempers the sharp Humours, and corrects their Acidities, and it refreshes the Spirits and nourishes. If Sleep depends upon an Exhaustion of the Spirits, and a Weariness ensuing thereupon, a Recruit of Spirits answers the End of Sleep ; and, in such a Case, a Dish or two of Chocolate will keep you awake, by repairing the Loss, and this Truth many do experience, who have study'd themselves into an Insensibility ; for, by taking Chocolate, they repair their Spirits, and become lively and brisk again : It therefore

answers

answers the End of recruiting the Spirits in those who have been too free in expending their Spirits in Embraces; from which Cause I have seen some fall into Swoons, and recover'd by Chocolate, taken plentifully. Weak Women, who by Fatigues of Thought or Exercise, feel themselves as if they wanted somewhat, they complain of constant Faintness and Dispiritedness, ought not to indulge, as is too common, in Cordials made of Brandy, but to take a Dish or two of Chocolate; these will recruit their Spirits well, and stay within them, without burning their Stomachs up with hot Liquors, which can have no other Effects upon them, than to give them Thirst, and create an Appetite for more Drams. The Good they receive so suddenly from these nice Cordials is soon lost, because their Effects are soon evaporated, and then they become faint again, and are obliged to repeat another Dram; whereas by taking Chocolate, they have Spirits given them that exert themselves gradually, and that are not so readily evaporated. The most agreeable Liquors seldom fail of producing Disorders and Diseases, because the Drinkers of them do too often exceed in their Use. And as this Liquor is very agreeable to many, some of those will sometimes exceed, and will then necessarily bring on Diseases: There is no doubt but Chocolate, being a gross Liquor, and containing a great deal of Paste in it, there will, in some Constitutions, ensue Obstructions, and particularly Persons who

who abound in Acidities, may suffer by its Abuse ; for the Oil it abounds with, may be render'd thick and obstructive by the Acidities, and then it would be a very improper Nourishment for Women, whose menstrual Flux is suppress'd, or for Persons under any Jaundices or Obstructions any where ; and although it has a Power to fatten, yet where there are Obstructions, it will be impossible for such to grow fat under such a State, because to grow fat, the Juices ought to be smooth, and circulate every where, in a flow Manner, and fill the Tubes of the Body ; but in such a Supposition this could not happen, because the Passages being every where obstructed, the Vessels would be depriv'd of their due Quantity, and then they would grow lean ; and it can't be deny'd but that Chocolate does not only produce Obstructions in those that use it excessively, but even in those who have any Tendency that way ; for the Lacteals, and other small Vessels where the Nourishment and Chyle passes through, being very small in them, let only pass the thinner Juices, and hinder the grosser from going through ; therefore I advise all such as have a gross or obstructive Blood, to forbear its Use ; for if Medicines act upon their Opposites, it ought only to be given where the Blood is too thin, and therefore in some hectic Cases it is a sovereign Nourishment : In some tickling Coughs that proceed from an acrimonious Humour fretting upon the Lungs,

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and always provoking them to cough in vain; Chocolate is a good Nourishment for these Persons, because it tempers such Coughs, and tempers their Humours : Fat being Oil thicken'd, Chocolate has a great deal of Oil in it, and by the Juices in the Stomach it is thicken'd, and will fatten ; but for this very Reason it is, that Chocolate palls the Stomach, two Dishes before Meat serve generally for a Meal to those whose Acid is not plentiful in the Stomach, for its Use will pall the keenest Stomachs ; and therefore is it to be avoided for three Hours, at least, before Dinner, and very often longer, if the Person be of a weak Constitution. In some Places, out of Wantonness, they drink it cold, and with Ice in Summer, but as these only consult their Palates, there needs not much be said against such a Manner : It is suppos'd they would cool themselves in hot Weather, if they are excessive warm ; the first Inconvenience they feel is a Chillness at their Stomachs, and then an Inflammation there ; and how is it possible to avoid such a Disease ? For the Pores of the Stomach are clos'd up by the Coldness of the Ice, and, upon such an Obstruction follows a dangerous Inflammation : If it passes the Stomach, it exerts its Force upon the Blood, by thickening it in such a Manner, that in a small Time they are taken with Pleurifies of a malignant Kind, inasmuch as those Inflammations do most commonly turn into Gangrenes. In short, they who use Chocolate

late as a Diet, suffer for it, by being subject to ill Habits of Body, with pale Faces, and therefore to phlegmatick Disorders, to wandering Pains, to Obstructions, to Shortnesses of Breath, to Purfines, to Loss of Appetite, to Fatness, and to all Distempers that can arise from a Thickness of the Juices.

Salt being a Mineral so much us'd in our Victuals, it is worth while to make some few Observations upon its Use and Abuse ; it is very certain, that our Blood contains a good deal of it, as Mr. *Boyle* has made appear, and as Dr. *Boerhaave* does also acknowledge ; and when it exceeds, it has dismal Effects : In producing our northern Scurvy, it has the greatest Hand ; but it also has its Uses in keeping our volatile Salts under, so that they shall not turn caustick, and give us a stinking Smell, as is common to some People, who eat little of it, or who have lost it by Urine or Excrements. Without this Salt our Victuals would make a much longer Stay in the Bowels, and the Stomach and Guts would be loaden with an useless Load ; it hastens forward the Motion of the Guts, and there is not a more sure Purgative than common Salt ; this is experienc'd by those whom *French* Clarets bind, for if they can bear two or three Drams of Salt in the first three or four Glasses they drink, what they exceed in will pass off next Morning, with Ease, and this helps to cool their Bodies : This is also known to Sea-sick People, who, by taking two or three Glasses

of Sea-water a Day, conquer their Sea-sickness, and all pass off by Stool ; it is invincible in our Blood, unless by volatile Salts and Diluters ; for, we know, that Water dissolves Sea-salt, and volatile Salts precipitate it, so that the most powerful Correctors of Sea-salt, are a Mixture of Water and volatile Salts. Salt-petre also is a good Remedy against an Excess of Salt in our Blood ; and even Salt of Steel is an excellent Medicine against too great Saltiness of our Juices. Sailors, who depend upon its Use so much at Sea, suffer many Diseases by it, it makes them subject to Fluxes, to Stiffness of Joints ; so it is owing to this salt Diet, that makes the Sailors so subject to Venery ; hence the Fiction of the Poets has some allegorical Truth in it, in saying, that *Venus* was made of the Froth of the Sea. Salt certainly helps our Digestion, because a gentle Stimulation causes a Contraction of our Fibres ; and if the Stomach is contracted, it grasps the Victuals the better, and squeezes them into an Emulsion. It is possible, that were it not for this Salt, we might, all of us, die of Dropsies ; for as nothing is more diuretick than common Salt, and we taste it plainly in our Urine ; therefore, as it passes readily by the Kidneys, the excessive Quantity of Serum wherewith we would abound otherwise, is carry'd off that way. Water-drinkers, that eat little or no Salt, are in Danger of Dropsies ; for they, who are order'd to drink Water, have it in View to rid the Blood of all

Salts

Salts whatever, and are therefore, at the same Time, forbid the Use of Salts of any Kind. There may be certain Occasions, where it is necessary to avoid Salines, and to drink Fountain-water ; but as soon as the Disease'd have receiv'd the Benefit they aim'd at, it is their Business to stop. It is of good Use also externally, in scorbutick Pains and Colicks, for, being heated and apply'd, it abates either : It has a Power of preserving from Putrefaction, and this appears in preserving Eggs in long Carriages, as fresh as if they were newly laid : It has also some Use in Husbandry, for, some Grounds being sprinkled with it, become very fruitful. If we wash Scabs of any Sort with Salt-water warm'd, it will make them scale off, because it contains an acid Spirit, that closes up the Pores.

Potatoes are a Diet much us'd every where, but more especially in *Ireland* and *Lancashire* ; they contain glutinous Parts, and a Starch is made of them, so that they are a Nourishment proper for thin and hot Constitutions ; but as all Jellies are apt to swell up our Stomachs, if we depend much on them, so do Potatoes ; their Juice is not readily divided by weak Constitutions, but it half ferments, and is therefore windy. Hot Peoples Stomachs being dry and tense, and all their Vessels being in the same State, such a Juice in them is split into minute Parts, and they serve to relax such Vessels, and sheath such sharp Juices ; but for cold Stomachs, and such as abound

with Phlegm, nothing is more prejudicial, and the rather, because they can't be eaten without Butter, which is clogging.

Clary is often us'd in our Diets of Eggs ; it is a Bitter not ungrateful, and is therefore useful in Diet, to correct any Acidities that are too keen in the Stomach, which give Birth to Colicks ; Cakes of Clary have the same Effects, and all Things made of Clary, have a Power of strengthening our Stomachs, and consequently of promoting Digestion.

Hops : These are us'd to make our Beers and Ales bitter and clear ; were it not for them our malt Liquors could not be of so general Use ; for all malt Liquor is naturally a slimy and viscous Juice, and our Stomachs would never digest such a Quantity without this Addition. Some have fondly suppos'd Hops to be the Cause of the Stone : Neither Barley nor Hops will cause it ; but if malt Liquor were to be made without Hops, we should find more Complaints of the Stone than at present ; for viscous Matter can easily suspend stony Particles in it, and such would be the Case if there were no Hops made use of ; but as they are added, they help to incide this Viscosity, and to render the Liquor thinner, and, consequently, help the stony Particles to settle : As all other Bitters, it is good in splenetick Cases, and corrects Acids, which are the original Cause of Coagulations and Obstructions ; our *English* Ale therefore, well brew'd, is a wholesome Liquor for Hypochondriacks

driacks and Scorbuticks ; and the bitterer it is, so they can bear it, the better and more wholesome it is for them. They are also good externally, in Decoctions, to cure scald Heads, and other stubborn Eruptions, because such a Fomentation culls out the Humour, and corrects it. In fine, Hops help to purify the Blood, to thin it, to correct Acids, to open Obstructions of any Kind, to promote our Secretions, especially of Urine, and to carry down thither all Gravel, to encrease our Appetite, to attenuate gross Humours, and to precipitate them, and is a very well contriv'd Plant for constant Use.

Ginger is made Use of in our Kitchens for many Things, and therefore I shall observe in what Case it is useful, that our Families may not be at a Loss to know how to use it. It has a very grateful Smell, and a very biting Taste, from whence it is concluded to consist of very volatile Salts and Oils ; by which it is entitled to be made Use of in Colicks, from four Humours, or from Winds ; the first of which it furiously attacks ; and dispels the latter with Force, and therefore must we be cautious in giving it in either Case, in too large a Quantity ; and in Wind of the Bowels, it must not be given, unless the Belly be open, or has been open'd by Glysters, or gentle Physick. It is good in asthmatical Cases, because it helps up their Phlegm ; and therefore, if they have not an inflammatory Fit of an Asthma, it is good to take it in their Alc

for this End. By a Fit of an Asthma I mean, that when asthmatick People catch Cold, they breathe short, and grow very feverish; and, in such a Fit, Ginger is too hot, and must be avoided. It heats the Blood, and makes it thin, and therefore, in all cold Cases, where the Complexion is pale, and their Pulse is slow, and their Urine is pale, or has a mealy Settling in it, or in the cold Fit of an Ague, Ginger given in Wine, is an excellent Remedy. In cold Palsies, Ginger infus'd in Wine, and drank of at proper Distances, is very proper, because it opens the Obstructions of the Nerves. The same Wine will open Obstructions of the Womb, and therefore, if it be continu'd long enough, it will open a Passage to the suppress'd monthly Flux in Women: But where Persons are of a warm and hectical Disposition, or have any Bleedings upon them, avoid it.

Nettles: These are often us'd in Kitchens, to make Soops of; and therefore it behoves me to say a Word or two of them: We make Use of Nettles in Physick, in the following Manner; we order Nettles and Plantane to be bruis'd, we cause their Juice to be express'd, and, when it's settled, we order two or three Spoonfuls of this Juice in Spittings of Blood, and, we call these, *The Tempering Juices*. Although all this be done with Advantage, in all preternatural Discharges of Blood, yet it is not well agreed among the Gentlemen of the Faculty, how they answer these

these Ends : 'Tis enough to you, that they have such an Effect, and therefore, as they have a Virtue of thickning the Blood, they should be forborn by all Women, whose monthly Flux is obstructed, and made Use of by all who are subject to Discharges of Blood, whether from the Nose, the Mouth, the Lungs, the Kidneys, the Intestines, Stomach or Womb. They are reputed diuretick, and may therefore be good against the Gravel. There is a Juice in Nettles that is very pricking, for, when you press the Nettle, the Sting is a hollow Pipe that has a Bladder of hot, pungent, and sharp Liquor in it : This Juice enters your Skin, and gives you Uneasiness and Pain, and raises a Blister : This Liquor makes Nettles diuretick, and this Virtue is look'd upon as the chief Cause of Nettles stopping Fluxes of Blood, inasmuch as it drains the Blood of its Serum, and so thickens it ; but few ever heard, that the primary Virtue of a Plant should not do more harm to the Bleedings, than good by such a Discharge : It is not much remark'd for its diuretick Quality ; and, if this were the sole Cause, we should hear of Bleedings increas'd by their Juices : In truth, they make a thick Soop, and, it is much to be suspected, they contain a good deal of viscus Juice within them, or, I fear, they would not be much rely'd on in these dangerous Cases.

Sage : Its Use is mostly in Thea, however, let it be us'd in our Diet, as it is sometimes, it
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is proper for thinning our Blood and Juices, and therefore in most nervous Cases which depend on a gross Blood: Some heretofore have given large Encomiums on it; but so much is certain, that it is of great Use in Palfies and Lethargies, in Cachectical People, in cold Cases; and it is reputed a Specifick, in Persons whose Hands tremble after drinking; for it being an aromatick Bitter, it must be cordial and warming; and as these Tremblings are the Effects of Liquors turning sour in the Blood, and making the Animal Spirits too eager, from whence the Nerves are prick'd, and are made to tremble; as the Sage is aromatick, it gives new Spirits; as it is bitter, it corrects the Acidity, so that the Nerves are comforted, and their foreign Juice is corrected, and the Trembling will cease by its frequent Use.

Opium. It may be esteem'd as somewhat odd, that I should rank this Drug among the Kitchen-Physick; but as Ladies deal pretty much in Venice Treacle, Mithridate, Diascordium, and Syrup of Diacodium, and these being Opiates, it becomes the more necessary to open to them the Virtues and Hazards of this Drug, as great Good or Harm must follow its Use. There is not a Servant that catches Cold, but they apply to their Mistress for a little Venice Treacle; a Child can't cry o' Nights, but its Mouth must be stopt with Diacodium: And thus you see the frequent Demand for these Things, all which contain
Opium

Opium in them, has made it necessary to shew where these may be of use, and when to shun them. I shall not descend to any Description of this Juice; it is well enough known: It was known and found to be of such general Use, that the Ancients call'd it *The Juice*; for *Opium* signifies no more than Juice: It is nothing but the Juice of Poppy thicken'd; altho' there is great Difference in the Choice. The most excellent and famous Effects it produces, are the appeasing of Pain, and causing Sleep; which two arising from one original Cause, I shall descend to speak of Sleep, before I proceed further, and we shall better conceive all that can be said of it. Sleep is a gentle Relaxation of the Nerves, by which the Spirits are softly mov'd thro' the nervous Channels: By Sleep then I don't mean a total Rest, but a slow Motion of the Animal Spirits: If the Spirits were quite at Rest, we should not hear Complaints of Sweats and Dreams, or of Effluvia's flying off so plentifully after a Dose of *Opium*: It appears by the Exaltation of the Pulse after it, that there is Motion communicated to the Blood and Spirits; but then as it advances and fixes more deeply in the Stomach and Vessels, these Effects cease, and either the Pulse grows slower and weaker, or we grow more torpid and stupid, and heavy, and fall asleep; all voluntary Motion ceases, and all seems to be without Motion or Action; as to the flaccid State of the Nerves, which it introduces, we may know that our Mem-
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bers are not mov'd, without a strong Influence of the Animal Spirits upon the Nerves and Muscles, and a Determination of them into the Parts mov'd; hence do we appear unweildy, when we are thoughtful; hence Melancholick People, whose Thoughts are taken up with Attention on Objects, have their Limbs weak, and, as it were, disjointed and unhing'd; mad People, and those under Phrenzies, or a violent Passion, have their Nerves rigid and strong, and full of Vigour; falling asleep therefore plainly proceeds from the flaccid State of the Nerves, and a gentle or slow Motion of the Spirits. If we inquire into the Nature of *Opium*, it is very easy to see, how whatever hinders the Influence of the Animal Spirits on the Nerves and Muscles, or whatever consumes and wastes them, makes us drowsy and sleepy; for this Reason, strong Exercise, or too great Attention, wasting the Spirits, causes Weariness and Sleep; and as cutting a Nerve asunder quite deprives the Part it goes to, of all Motion, so Fatigue or Evaporation of the Spirits is the Cause of a temporary Privation of Motion: But when we come to examine the component Parts of *Opium*, we are at some Loss to know, how volatile Salts and Oils should act so suddenly, as *Opium* consisting of these Things does; we are amaz'd: There are no volatile Salts, we have as yet found, that will act thus, nor yet any Oils in all Pharmacy, that will have these Effects separately or jointly; some therefore suppose,

suppose, that these Effects are produc'd by Steams issuing from *Opium*, and which Physicians have agreed to call Narcotick Steams ; by the Union of the Oils and volatile Salts the Nerves are relax'd, and the Blood is attenuated ; so that tho' our Blood moves on briskly, as the Sweats demonstrate, yet we don't feel. It is us'd among the *Persians* and *Turks*, who eat it in great Plenty, without any other Damage than that it fuddles them, if they have taken too much of it ; which in the Time of their Wars is always very scarce, because they take it more plentifully at that time to excite their Courage, or to exempt them from the Apprehension of Danger ; and the Reason why they can take so plentifully of it, is because they accustom themselves to it betimes ; for when they are Children, they take of it very frequently. We need not trouble you with any Reason for this Effect ; we need only reflect on our own Customs at home, where a Glass of strong Liquor will fuddle a young Beginner, but a Gallon will not have this Effect on a staunch good Fellow ; nay, I have seen Children of the *West Indies* drink more Rum at a Draught, than I could in a Day, and yet not be at all concern'd in Liquor : Besides, these Persons that live in so warm a Climate, are so dispirited from the Heats that continually sweat them, that they take Opium as a Cordial to revive them, its volatile Salts are so recruiting : For my own Part, I have known several, that have been
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accustom'd to it, and found such Relief by it, that they had not Power to resist its Use. As for its Virtues, it is binding, it gives Sleep, eases Pain, and provokes Sweat ; it is rarely made use of by itself, but is generally blended with earthy, aromack, and other Medicines proper for the Diseases that reign : Opium appeases Pain by relaxing the Fibres, so that they can hardly admit of being further relax'd, and then no Stimulus or sharp Thing can make the Nerves tremble, without which Motion there can be no Sensation : The Sense of Pain cannot be more sharpen'd, than by sharp Particles insinuating themselves between the Interstices of the Fibres, where, being put into Motion, they heat and cut asunder where-ever they are fix'd : Now Opium retards their Motion, blunts their Edges, and relaxes the Fibres, so that the Effects of these acrimonious and pungent Bodies are prevented, and no Pain ensues ; nay, Bodies that are sulphureous and smooth, are always observ'd to abate Pains, to blunt the Fierceness of Salts, as well within us as without us, as is seen by Experiments ; for we observe so sharp a Salt as is Spirit of Nitre, to be sweetned, and its Sharpness to be abated by Spirit of Wine ; and Practice makes us know, that these Bodies that are oleous and viscous do obtund Pains in the Ears, Teeth, and elsewhere ; with this Difference, that *Opium* ceases to act in six Hours, but acts more quickly ; whereas all other Obtunders act very slowly and gradually,

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but then they keep the Ground they gain. Another general Effect Opiates have, is to cause Sleep, where excessive Watchings cause Pain; or, on the other Hand, where Pain causes Watching, by the Sharpness of the Humours, or excessive Motion of the Spirits; Opium by taking off the one, the other ceases o' Course; for it obtunds and checks any excessive Hurry of the Spirits: Sometimes it eases Pain, when it does not cause Sleep, because Sleep proceeding from the Hurry of the Spirits being allay'd, the Pain may be appeas'd, and yet the Hurry may not be quite allay'd. It is greatly us'd in stopping all Secretions; for it appeases Irritations, and most Discharges are produc'd from that Head; from this Quarter happens it, that Defluxions in Coughs, and Bleedings do attack us; and for the same Reason does it stop Fluxes of the Belly. Indeed it is look'd upon as a Provoker of Sweat, because it takes off the Spasmodick Contractions, opens or relaxes the Pores, so that the most minute Passages being open'd, the Steams find an *Exit*, and then the volatile Parts it contains excite a brisker Motion in the Fluids. It is commended, as of certain Benefit, to Diseases of the Head, arising from a furious Motion of the Fluids there, and therefore is it constantly in use in Phrensies, Madnesses, and the like Cases; and it cures, as well as prevents Epilepsies, if join'd to Cinnabar of Antimony. It is an excellent Remedy for convulsive Pains of the Belly, and hypochondriack

driack or hyfterick Fits, and it is highly in ufe in Hiccoughs, to which it is almoft a prefent Relief, becaufe it compofes the irregular Hurry of the Animal Spirits, and it obtunds the too great Senfibility of the Parts : It relieves Pain of any Kind, fuch as thofe of the Kidneys, Joints, or Feet ; and it ought to be us'd, wherever fuch Occafions require, in all Epidemical Fluxes, whether of Blood by the Noftils, by the Stomach, the Lungs, the Inteftines, or the Womb, or of any other Juices that flow forth : It ftops Vomitings, Fluxes of the Belly, Bloody Fluxes, and exceffive Purgings : It is good in Catarrhs, dry Coughs, which proceed from a fharp and faline Humour ; nay, it is even good in any Sort of Fevers, to allay the Anxieties and Reftlefsnefs, and procures Sweats, if it be judiciously adminiftred. We ufe it alfo outwardly to appeafe Pains, which fome have call'd into Queftion without Foundation : But it is not to be us'd promifcuoufly ; Caution is requir'd in its ufe : It is often us'd join'd with Phyfick, becaufe it appeafes Pain, and then carries off the Cause of the Diforder ; but whenever *Opium* is mix'd with a Purge, the Dofe of the purging Medicine muft be augmented to at leaft a quarter Part more than ufual ; becaufe, the *Opium* would otherwife blunt the Phyfick, and it would be a Queftion whether the Phyfick could work at all. I obferv'd, that *Opium*, to do Good, fhould be us'd with Difcretion, becaufe it is an excellent Remedy, and therefore it may do great Differ-

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vice ; for nothing can do Good, if it be incapable of doing Harm. In acute Diseases, if it is to be drawn into Use, it ought to be in the Beginning or Encrease of the Disease ; whilst the Strength of the Patients, and all their Animal Faculties, are in good Plight ; while the Pulse and Respiration do mutually correspond with each other in an uninterrupted Manner ; while, in fine, there is a due Vigour and Force in all our Members, *Opium* is a good Medicine, and convenient ; but if the State of the Disease, or a Crisis approaches, it ought not to be administred : If Inflammations draw towards an Abscess, or if they are turn'd into them, *Opium* should be avoided ; because Surgeons have observ'd, that by blunting the Points of acrimonious Humours, they can't stimulate nor be mov'd so much, and therefore it renders the Matter unfit for Secretion : It then is dangerous at such a Time ; it hastens the Patient's Death, by rendering them stupid, by leaving them languid, and weakening them. We must have a principal Regard to each Person's Constitution, unless we have a Mind to mow down Patients ; for where there is a Viscidity in the Humours, or a Want of Juices, we must be sparing in its Use, because the Animal Spirits are few in such Patients, and they go off asleep ; wherefore in Apoplexies, Lethargies, Palsies, and in Diseases springing from a gross Matter, in Difficulties of Respiration from Phlegm, in a Dropsy of the Breast or Belly, and such like

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Oppressions,

Oppressions, we must avoid its Use; in cold Diseases, where the Pulse is weak, and a Heaviness of Head afflicts your Patients, it must be forborn, because such People very rarely have any acute Pains on them; but if they should, then a small Quantity may be afforded: Opium is not to be us'd in Obstructions of the Belly, or in Costiveness, nor in Suppressions of Urine, because it blunts all Irritations whatever; nor are Women in Labour therefore to take *Opium*, because that Pain is necessary; wherefore among so many excellent Drugs as are found in use among Physicians, Opium may justly claim the Preference over most, if not all of them: It is a *Panacæa* for Numbers of Diseases, performing Wonders on Mankind: *Sylvius* declar'd, if it had not been for Opium he would not have practis'd Physick; and *Platerus* wish'd, that some at the Helm of Physick had not condemn'd its Use, since without it nothing great could be done in Practice. I own we may find some Authors exclaiming against it most violently, because as it is a Medicine of Note, it either does Good or Harm eminently: But must it be rejected for being abus'd? It is certainly very unjust, that a good Drug should be decry'd, because they who gave it did not know its Effects; and who is so great a Stranger in Physick, as not to know that even Chymical Medicines, which are safe and in daily Use by Physicians, but also Galenical ones, if they are ever so innocent, and are abus'd, will have

have ill Consequences attending their Use? And does not our Diet itself conspire to destroy us, if we make use of such as is contrary to the Nature of the Disease we labour under? But who is so simple as to refrain from Wine in Moderation, because a large Quantity is found to inebriate? or who from the Use of Victuals, because some are prejudicial? Neither is Opium therefore to be rejected, because it is found to stupify, when there is an absolute Necessity for a Patient to be void of Sensation for a while: Pain is a Circumstance, that obliges us to stupify or to suffer our Patients to die; it must follow therefore, that they who decry Opium, or are afraid of it, must have err'd in giving it in too large a Dose, or in an improper Manner, or in a Disorder that could not bear its Use: There are a great many Compositions, in which *Opium* is a main Ingredient, of which I shall now take Notice: In the Opinion of some, a Solution of Opium in Water, is the best Preparation of it: This Water may either be elemental or distill'd; for other Waters are too compound, or too thick or gross; this Solution must be evaporated to an Extract, and made use of: Others again commend Spirit of Wine for the Solution of *Opium*, but this leaves a great many subtile Parts behind: Others again commend Acids for dissolving it; Opium does indeed dissolve in Acids, and such an Extract is proper in Bleedings, and other Discharges: Others again do highly commend a Dissolution of it

in the Phlegm of Salt Armoniack and Spirit of Vitriol, because the acid Spirit is reputed Sulphureous and Anodyne, and the Phlegm of the Salt attenuates the viscid Parts of the Opium, and makes it enter the Nerves more readily; but our Method in *England* exceeds all the Preparations, namely, Wine or aqueous Spirit of Wine dissolves it all intirely; and as either Part of the Opium is found to be effectual for the Ends we have propos'd, therefore as we have both the viscous and gummosse Part, we obtain all its Parts. Some have busied themselves about the Correction of Opium, and have believ'd there were malignant Parts in it, that could not be conquer'd by Nature; some have added Pepper, Ginger, Castor, Saffron, and even Euphorbium, in order to correct the Coldness of the Opium; others have torrefied it, with exhaling the malignant Humidity with which they suppos'd it abounded; others again correct it with Vinegar and other acid Juices, to curb its foetid and nauseous Smell; but the *Turks*, who daily make use of it, are not so scrupulous about its Preparation; they eat it alone, and feel only an Indolence from it. Wherefore I esteem the best Preparation of it to be that which is the simplest; and as there are many Intentions to be answer'd at once sometimes, therefore such Mixtures as will answer the Ends of those other Intentions, may either be made use of in officinal Preparations, or may be prescrib'd to be mix'd as the Occasion requires:

quires : It is hardly possible to provide for all these Intentions in Shop-Compositions of Opium ; however, there are some which answer several at once, and as they are much in Use, I shall take Notice of the most common, and recite to you their Virtues : *Venice-Treacle* is a very common Medicine made use of in Families, and therefore ought I, who have undertaken this Task, to communicate what Good or Harm it does, that no Blame may lie at the Door of so well-receiv'd a Remedy : It is a *warm Opiate*, and may be given in the following Cases with Advantage, namely, in Colicks after a Dose of Physick ; in Defluxions of Matter into the Lungs ; where any one has got Cold ; after Bleeding and gentle Physick ; in Fluxes of the Belly at Bed-time ; in Convulsions, after proper Discharges ; in Hoarsenesses, from Cold ; in Head-aches, and other Pains ; in Asthma's, that are dry ; in Dropsies, accompany'd with Pains ; in expelling dead Children ; in promoting the menstrual Flux ; in slow Fevers, where they are restless ; in the cold Fits of Fevers ; in expelling repell'd Scabs ; in Bites of Vipers and others externally ; but it ought to be avoided in Fevers, where there is any Sleepiness ; in the Beginnings of Fevers, till proper Discharges ; and, in general, there ought to be a Caution in the Use of it in common feverish Colds ; it is too common for the Ladies to order this or the red Powder to be given at the Beginnings of Colds, by which Mistake they blow up the Embers,

and turn them into a Fever, and so endanger their Lives. *Diascordium* is another common Medicine in Families, and every one thinks they know when to give it ; this Medicine is mostly us'd among Physicians for putting a Stop to Fluxes of the Belly ; and therefore after proper Discharges have been made, it is mix'd up with any compound Waters, and others, and given either by Way of Draught, or by Spoonfuls at convenient Distances. *Mithridate* is a Composition near alike to Venice-Treacle, but not so effectual, and therefore is it at present banish'd from common Use ; it is good against all cold Pains, and if apply'd outwardly in Pains of the Teeth, it is a good Anodyne Plaister, and gives Ease ; it also expels the dead Child ; but it is so far exceeded by Venice-Treacle, that it is, I say, grown out of use. *Laudanum* : This is sometimes given in Families, but it ought to be cautiously made use of ; it is chiefly us'd for giving Ease in Pains ; but enough of this : Lastly, As to the Quantities of Venice-Treacle, *Diascordium*, and *Mithridate* necessary to be known ; the greatest Dose of Venice-Treacle is four Scruples, and the least three Grains ; *Mithridate*'s greatest Dose ought to be four Drams and two Scruples, and the least twelve Grains ; the greatest Dose of *Diascordium* ought to be five Drams and twelve Grains, and the least six Grains ; as for *Laudanum* or *Pil Matthæi*, I have no Inclination that Families should deal in it, and therefore

fore I forbear to mention its Doses at all.

Women with Child ought to be consider'd ; People may doubt, whether it be worth while to inquire into their Diet, since there seems to be no Difference, to be observ'd, between such, and others that are not in that Condition ; for sound Women are generally with Child, and therefore no Difference can be observed in their Diet : but Experience shews us the contrary ; for it is known by Practice, that altho' sound Women be with Child, yet their State of Health varies in them, so that Health in them, and other Women not with Child, is not the same in all things ; and moreover, Brutes themselves, by a sort of Instinct, when they are with Young, do take up quite a different Regimen ; by which Token, the Huntsmen know their Deer to be pregnant, and the Shepherds and Jockeys take care of their Flock, and their Mares, and feed them better : How much more ought a Physician to take care of the Diet of big-bellied Women, since they never offend so much as at that Time, altho' their Health in the Time of Lying-in, and the Child's after Birth, depend greatly upon his Care. Since Impregnation changes the State of Health of the *Fœtus*, as well in Women as Brutes, for by the Increase of the Womb, some Parts are compell'd to give way, and are compress'd, others are expanded and lifted on high, so that the arterial Blood is not carried on in the same Course as before, nor is the Lymph secreted from the Blood carried back in the same Manner, and

the Particles of the Chyle acquire a different Disposition, and those which serve to carry the venal Blood are not without some Change. Moreover, the weaker Sex must suffer some Change, when the Flux, by which the abounding Blood used to be discharged every Month, according to Nature, in grown Women, is suppress'd, and quite stopp'd, during Pregnancy. Lastly, as the Health of pregnant Women is greatly to be preserv'd or recover'd by the Assistance of Diet, this Inquiry is well worth our Pains. It is well known, that Meats and Drinks are a Part of this Regimen; but all the Non-naturals must come into Consideration: However, it is certain, that the principal Care to be taken, must be concerning the Quality and the Quantity of their Meats and Drinks. And as we are not going to give general, but particular Advice, we must have regard to all the minute Circumstances of every pregnant Woman, and to the Configuration of the Parts; for which Reason, as every big-bellied Woman before Impregnation was not delighted or pleased with the same Victuals or Drink, altho' the Victuals she took before, should not chance to be the most wholesom, we must not quite forbid her the Use of customary Things, only we must moderate their Use; for, as old *Hippocrates* said, Bad Victuals, which we have been used to, are the most readily borne; and Physical Histories do testify, that Persons have fallen into grievous Diseases, for having too suddenly changed their Way of living; and there-

therefore Pregnants must not be strictly tied up to Meats and Drinks: However, they must not be indulged so far, as to grant them a promiscuous Liberty of eating and drinking all their false Appetites crave, altho' the generality of Women do strictly defend, that Women are to eat or drink all they desire, and that no Harm can ensue from thence; on the contrary, that a Denial of what they long for, both hurts the Woman and Child, and they know readily how to bring Examples of all this: so far must be granted to Custom, that we ought, in common Prudence, to grant them such Things as they greatly desire, or all the Damage that may follow will be laid to that Denial; for the Fancy of Women is strung up so high, with the Fables handed down to them of wonderous Harms ensuing, that they don't care to bridle their Appetites, or be denied whatever they ask for; however well grounded all this may be, I refer you to a late Pamphlet on this Head, where the Marks from Imagination are more laugh'd, than reason'd out of Countenance: Passing this over, I advise Pregnants to insist upon wholesom Diet, and such as may correct the Fault of preceding Errors; for it is a perverse Opinion of some silly Creatures, that they may eat whatever they please, so you take Care in your Lying-in; and thus are poor Women in their Pregnancy advised to eat Sours, Sweets, Saltish, Viscous, or Austeres, as much as they please, and full Promise is given them, that all will

go well with the Infant ; when Experience shews us, by the Childrens Ailments, that nothing is more prejudicial than such a Liberty ; for as an ill State of the Juices transmits an hereditary Depravity to the Child, so also Women using an ill Diet corrupt their Juices, and consequently the Child's too ; for Epilepsies, Gripes, Breakings-out, and all other Ills proceed generally from the Mother's Liberties : As for the Quantity they are to use, it is a Question, whether they ought to use a full, or a spare Diet ? In Answer to which, I must say, that the Varieties of Subjects are to be consider'd ; for they who are dry and lean Carcasses, ought to feed plentifully ; but full and plump Women, more sparingly : for some Harm befalls Pregnants, both as to themselves, and from the Child's too great Increase ; to the Pregnants that are of a full Habit, or of an ill Habit, it happens that their Legs swell, from the abundance of Humours stagnating, or the Vessels thereabouts swell, and cause Trouble and Pain, or if the Head is stuff'd with Plenty of Blood, and brings on a Head-ach, or bleeding at Nose, or a beating of the Temples, or a Tooth-ach ; to such, a spare Diet is proper, to which you may add, Tea and Coffee, or Ptisans, as also gentle Laxatives ; for altho' purging Physick can hardly be given without the Danger of bringing on Miscarriage ; yet Laxatives come not under that Head. Damage befalls the Mother from the Growth of the Child, not so much in her Pregnancy, as
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at her Labour ; for if the Child be very large, and the Vessels much distended, it will have much ado to find Passage ; and for this Reason is a spare Diet convenient, and now and then drawing off a little Blood is very useful, which does also contribute much to other Disorders arising from an excessive Circulation : it is certain, that Bleeding is almost necessary in plump Pregnants, when they have a good Stomach, and where the Menfes flow'd plentifully before Conception ; and this is the stated Practice all over *Europe* at present, and it is often repeated with Success where any violent Symptom infects plethorick Women ; and Mr. *Boyle* somewhere blames those who gave too much Credit to *Hippocrates's* Aphorism that forbid this Discharge. We must in the next place give Directions about the Motion of the Body, and the Passions of the Mind in Pregnants ; violent Exercise seldom fails of causing Miscarriage, because when Vessels are full with Blood, Exercise shakes the Vessels, and breaks them ; from this Rupture or Breach Blood flows, and the Miscarriage ensues ; especially if they are subject to Miscarriages from the Nature of their Constitution, to them all violent Motion or Agitation of the Body is prejudicial, because it tears the After-burden from the inner Membrane and Glands of the Womb, and so causes the Infant to come before its Time. And a sedentary Life is carefully to be avoided by all, because as the Muscles of the Belly are compress'd by this
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kind of Life, they can't be extended, and therefore the Child can't come to its full Growth: moreover, Digestion must be ill perform'd for want of Exercise, and then the Mother's Blood being deprav'd, the Child's of course becomes vicious; for as the Pores become open every where by Motion, many Steams of no Use to the Body, if not dangerous to it, are retain'd, which ought to have been thrown out of it: Besides, Motion causes regular Stools, which by sitting are too long kept within, and they serve to fill their Bodies with Wind and Obstructions. We must also regulate the Motions of the Mind, if we would do any great thing, or endeavour to do Service to Pregnants: If Imagination has any Force upon the Infant, it is done by Thought, and that by some excessive Motion or Exhaustion of the Spirits: there have not hitherto been wanting Histories and Observations on the Harms done to the *Fœtus* by the Force of Imagination; but so much we may grant on the Force of Imagination, that it either can move or arrest the Motion of our Spirits, or how comes it to pass, that Frights have kill'd, and Joy has caus'd Miscarriages? wherefore let Women avoid Grief or excessive Passions, which may have an Effect on the Mother's Blood, for there is the same Circulation in both, and the same Consequences must follow from the same Changes: As then the Mind acting has the same Force upon the Child, as the Mother's Exercise, big-bellied Women should

should avoid the Passion of Grief, and if such should be surpriz'd with it, we must endeavour quickly to divert them; or the Child, whose *Stamina* are tender, will be greatly injured thereby: whereas Diversion takes off the Edge of Grief, and you may prevent or remedy any Injury. As to their Sleep, whenever they have exercised, or thought too intently, they ought to indulge themselves in taking a large Nap; but they who have no Business, or nothing to fret about, may sit up later without Harm; yet as to Sleeping, Custom regulates all the World; but Women with Child should avoid sleeping after Meals, because it occasions Night-mares, Dreams, and Frights, inasmuch as the descending Vessels are compress'd as well by the Child, as by the Victuals, and the Circulation is disturb'd thereby. As to their Stools, if they are costive, they ought not to take Physick indeed, unless some great Occasion calls for it; but nothing hinders them from procuring one at any time with Prunes, Manna, or Syrup of purging Roses: Glysters can't be so well given, because the Pipe disturbs the Womb, and Suppositories are, for the same Reason, inconvenient. Bleeding is often found of great Use, we therefore have only occasion to inquire into the Time of letting Blood; but as no one would advise it only for the Discharge of an excessive Quantity or Motion in the Vessels, that Necessity, whenever it is pressing, must be obey'd; for by so doing, we prevent the
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impending Strangulation of the Infant, and the Disorders of the Mother; Pains therefore in the Legs, and Aneurisms or Varix's are prevented by it. Lastly, we shall observe the Effects of the Air on Pregnants; the Air serves to digest our Victuals, to have an Effect on the Mind, to regulate the Vicissitudes of Sleep, and even to cause or retain our Secretions; for a serene Day makes all look gay, and helps us to think better, hinders us from being dull and drowsy, gives us Briskness and new Life; nay, some Physicians are for giving no Physick, without fair Weather: Therefore an Air full of Vapours, especially of stinking Steams, must be in some manner prejudicial to childing Women; they who can afford to chuse wholesom Situations, ought to reside in them: If any Medicines can be borne, or are requisite, they are generally such as correct the Acidities in the childing Woman's Stomach, Blood, and Nerves; Wormwood then, Crabs-Eyes, and Aromatics are much in use, but be aware of Brandy-Spirits, any how soever cook'd up. It is evident then, that Women with Child ought to avoid whatever does disturb the Spirits, or Blood, or fill the Stomach with crude and sour Chyle, and whatever shocks the Womb. And as there is a near Affinity between Childing and *Childbed Women*, I shall subjoin a few Rules for them also. The excessive Pain and Anguish poor Women suffer in Labour, the Necessity of a large Discharge of Humours by the Womb after it,

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and the great Hazard of falling into Fevers, Inflammations, Gangrenes, and the like, make it very necessary for Lying-in Women to be exceedingly careful of themselves : What can be expected after Labour, but Watchings, and Pains ? Wherefore Rest and Sleep are absolutely required ; their Spirits must be repair'd, and yet Fevers must be avoided ; they should avoid, for some time after their Labour, any Flesh-Meat, because that would inflame their Blood ; they should drink plentifully of White-wine Whey, to cause a thorough Discharge, from the Womb, of Matter that has resided there for nine Months together, and which, if it were retain'd, would lay a Foundation for Fevers or Fluxes ; and if they put a little Saffron, or Pennyroyal, or Rue into their Whey, it would be so much the more wholesom for them : they must carefully shun catching cold, especially in the Womb, for this has too often been the Ruin of the poorer Sort ; they, forthwith, rise the third or fourth Day, and expose themselves to the Hazard of catching cold in their Body, this checks their Cleansings, and they are immediately thrown into Fevers, which are always dangerous in Proportion to the Matter that causes them ; and this Matter being very offensive to Nature, they generally die in these Fevers : The only Method to preserve Lying-in Women from Danger, is to keep close in Bed, to encourage Sweats, or a warm Dew, for six or seven Days, by drinking Sage-Tea, Sack or Whitewine Whey, or
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thin Broth of Chickens, or Mutton, Gruel-Caudle, and Panado, to avoid all Flesh-Meat during that space of Time, and to rise as little as possible, unless to have their Bed made, and then to have their Feet wrapt up in Blankets, to keep out the Air from the Womb: By observing these few Directions, it is easy to come safely through, otherwise it is a mere Chance but they suffer for their Neglect, immediately, or at least some time after. How many Victims have I seen made of deserving Creatures, for want of these few salutary Rules! some have fallen by Cold taken into their Bodies, others by too hasty Allowances of Flesh-Meat; some by fretting and teizing Passions of the Mind, others by a Stoppage of their due Purgations, and by Inflammations, Fluxes, Fevers, and Gangrenes; others again for want of encouraging a sufficient Perspiration, and even gentle Sweats, so that their very Heads have dropt and run; this last Circumstance is a pleasing Trouble, and never fails of bringing Safety: Too great Care can't be taken on this Point, and therefore the Readers will pardon any too great Diligence on it; when therefore the Midwife has done all she has to do about the Labour, let all cold Things be shunn'd, not only as to what concerns Victuals to be taken, but also as to the Air, which being, as I have remark'd, receiv'd into the Womb, by provoking it, either causes their Cleansings to flow immoderately, or by coagulating them, wholly stops them, and is the Cause

Cause of fatal Changes : Moreover, from Cold the insensible Perspiration is immediately suppress'd, and brings on a great Variety of Ills ; particularly, because at the Time of Labour the intense Pains have heighten'd this Discharge, and the Cold does not stop an ordinary Perspiration, but one that has been doubled by Accidents ; and what can be hop'd for under such Circumstances ? Hence is there an absolute Necessity for Child-bed Women to be kept in a constant Dew ; and, because they presently complain of Thirst, and are greatly weaken'd, a little generous Wine, taking off the Cold, or rather warm'd, or a little Wine warm'd with a Crust of Bread in it, (and some give Broths) may be allow'd to recruit their Spirits, but not so much as to inflame. Their Diet should be very thin, and void of all Flesh-meat. They must shun any Vexations ; more especially, Anger and Frights, because from Anger arise dangerous Fevers, and from Frights there ensue either violent Hæmorrhages, or a total Suppression of the Cleanings. But why should I detain you on these Topicks, since the Effects of Anger and Frights are so well known to the weakest Capacities ? There remains one Thing more to be observ'd concerning the Sleep of Child-bed Women, which they should not indulge immediately after their Labour, although they should incline ever so much to it ; since hysteric, hypochondriack, or convulsive Fits do often ensue upon Labour, un-

der the Shape of Sleep, that it deceives the Midwives, and the poor Women sleep on, and never wake afterwards ; forbidding them therefore to sleep, if they do, you are convinc'd it is the Effect of a Disease, and you are warn'd to take proper Care. The Disorders that naturally follow Labour, are their *After-pains*, which are extremely troublesome : A *Costiveness* and the *Milk-fever*, as it is commonly call'd, but improperly enough, if we look into the Reason of Things, because it neither arises from the Breeding of Milk, while the Blood flows from the Womb to the Breasts, and so is much agitated, since this is evidently absurd ; inasmuch as the Womb has some arterial and venous Ramifications, and the Breasts others, and, it is plain, that Milk is not bred from Blood ; neither does it spring from the Regurgitation of Milk from the Womb to the Blood, since this is a *gratis* Assertion ; for supposing, but not granting, that any Milk were resorb'd by the Blood-vessels, the very Moment the Ramifications of the Arteries and Veins, next the Womb, running through the Placenta, are broke, that is, in the very Labour ; would that happen the third or fourth Day after the Birth ? No, surely, for as these Ramifications are small, so are the Breaches made, and which are clos'd intirely ; would also that small Quantity of Milk, which is nothing but Chyle, produce a Fever ? Then would there be Reason to fear Fevers every Day after our Meals, nor does
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it happen from the swelling of their Breasts, by the constant running of Milk thither, and its Return from the Womb, since this is fully as natural as the Distension of the Breasts, nay this Swelling and Pain are a Product of this Fever; so that it does not properly arise from Milk, though it need not lose that Name, because Milk accompanies, and it is the most kindly of all Fevers, inasmuch as a gentle Sweat carries it off. The common Attendants of Labour, though not constant, are the following, namely, it happens that either from a hard Labour, or a large Child, a Wound may be made in the Passage, which is attended with a Swelling of the adjacent Parts, an Incapacity of holding their Water, and some other Symptoms; for, while the Pains and Throws are pressing and violent, there is Danger, that either the Mother or the Child, or both, should perish, the Midwife makes more Haste than usual, and dilates the Part considerably more, it is hardly possible to avoid such an Inconvenience; or when the Secondine, or After-burthen, is not drawn entirely away, but part of it is kept within, and there rots away by Piece-meal: the putrid Matter mixes with the Blood, and corrupts it, and disturbs the whole Mass, and then Pleurifies, Fluxes, Hystericks, Convulsions, Quinsies, Swoonings, Fevers and Gangrenes succeed; or from tearing the *After-burthen* from the Womb, and by that Violence the Womb it self is injur'd, so that the

least that happens, is an Excoriation, but very often Gangrenes succeed from an Inflammation and Abscess, or from a Suppression of the Cleanings, or, at least, too sparing a Discharge of them, or from too large a Flux of them; or from Wind by catching Cold; or from some few other Causes. As to the natural Accidents, namely, the *After-pains*, they continue after Labour, and each resembles a fresh Labour, and are caus'd from the Womb's Irritation, not yet appeas'd, hence then Spasms and Convulsions arise: next the *Costiveness* arises from the Discharges made from the Womb, the Breasts, and from the Pores, by Sweating, which call off all the Moisture, and makes them costive. Thirdly, The *Milk-fever*, with all its Symptoms, to wit, Shiverings, a painful Distension of the Breasts, a Weight of Shoulders and Back, Head-ach, Thirst, and the like, comes on the third or fourth Day; because the lying-in Women keep quiet in Bed, and their Humours have, for some Time past, been under a State of Compression, but being now set free, and the Channel being turn'd, the Fibres begin to contract every where, and this Contraction being universal, a quicker Motion is communicated for some few Days to the Blood, that is, a gentle Fever arises. It is a common Maxim, that place the Cause, and the Effect follows, wherefore ought it to be true, that if you take Care that the Cause be avoided, you prevent the Effect, and although the Cause should act, yet by removing

ving it suddenly, you prevent the Consequences. Hence it is evident how we avoid the *common* Attendants of Labour, for the *natural* ones must follow of Course ; I have shew'd, that these arise from a hard Labour ; from the Retention of the After-burthen ; from tearing the Passage, and the rest. As for the Largeness of the Child, all that can be done is to consider the Size of the Woman, with respect to her Spouse ; and if it be found that the Passages are to be suspected of too small a Size, we ought, for some Time before their Labour, to cause them to take oily Things inwardly, and to cause them to foment the Parts with Milk warm'd, twice a Day, and, in the Time of Labour, to make gentle Haste. The Retention of the After-burthen is a troublesome Accident, which may not happen from any Ignorance of the Midwife, for sometimes it is stony, or sometimes it sticks very close, where it is left behind, or where any part of it is left, which you may guess, without seeing, by the Continuance of the Throws, like fresh Labour, and by the nasty Smell of what they void ; we must try, by all Means, to expel it by various Drugs made of Roots of Birthwort, Briony, Orris, Leaves of Mugwort, Savin, Penny-Royal, Rue, Lavender, Flowers of Saffron, Myrrh, Galbanum, Ammoniacum, and Spices ; Castor, Amber, Borax, or Preparations of these. If by the quick closing of the Orifice the After-burthen is retain'd, the Midwife tries with

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her Finger to open the Neck gently, and then introduces another, or more, and searches where it sticks to, she gently removes it : Where it can't be extracted but by Piece-meal, great Regard must be had to the Mother's Spirits and Strength, and great Discretion is requir'd in the Midwife, lest the Womb should be excoriated, or torn, which will oblige her to have Recourse to healing Herbs, such as Comfrey, Horsetail, St. John's-wort, Sanicle, and such like, to Flowers of Betony, Mullein, to Turpentine, Balsam of *Peru*, and Opiates themselves. This close Adhesion may be prevented, if Women with Child avoid glewy and gross Victuals and Drinks, and make use of moderate Exercise at convenient Distances. *Womens Cleansings* first run in the Shape of pure Blood, then like the Washings of Flesh Meat in Water ; and, lastly, they appear of different Colours, like to dirty and muddy Slime, till the Womb recovers its usual State ; the Cause of this Flux is easily accounted for, if we consider with Attention what happens in the Time of Gestation, for as Women swell, so does their Womb, and all its Coats ; and when they come in their full Time and Delivery, the After-burthen being taken off, the Womb disgorges it self by the Orifices that are made, and the Flux of this Blood is call'd the *Cleansings* : If this flows in a natural Quantity, all goes well ; but if it flows too sparingly, or not at all, Danger threatens, Cold often stops them, which Suppression

pression is attended with Pains of the Womb: it is usual with the Women to give Pennyroyal Thea on such an Occasion; and if they foment the Belly and Parts with a Decoction of Mallows in Water, and add to the Thea, now mention'd, ten or fifteen Drops of Tincture of *Castor*, they would prevent Inflammations, Abscesses, Gangrenes, Fevers, and the like Mischiefs. If they flow too immoderately, then Swoonings and Weakness ensue, and we must be cautious in our Proceedings; it is a Mistake which ought to be rectify'd, for Midwives to give *Irish* Slate to promote the Cleanings; for it is an Astringent, or binding Remedy, and ought to be given in a Flooding; and therefore we should mix a little of this Slate powder'd in an Electuary made up with Dragon's Blood and Conserve of Roses together, and give of it often in a Day: We use Bistort Roots, Comfrey the lesser, Plantane, Tormentil, Pomgranate Flowers, and such like, boil'd in Water, for stopping an immoderate Flux of these Loches: As for Winds in the Womb, admitted into it by exposing themselves to the cold Air, we ought to stowe the Part with Cloves, Nutmegs, Cinnamon, Carraways, or Anniseeds, in order to expel it again. In general, if Errors are avoided, and sufficient Directions have been given how to avoid them, none of these Misfortunes can attend Lying-in Women; wherefore I shall speak now of the natural Attendants on all Labours, that is, of the After-pains, the Costiveness, and

the lacteal Fever: The Pains are to be assuag'd with Anodynes, such are Dill, Chamomile, Marsh-mallows, Linseed, Fenugreekseed, Poppyseed, Opiates, and Sperma Ceti, adding Carminatives, or Expellers of Wind of the gentler Sort, lest they raise Disturbances, if Wind accompany them. It is made a Question, whether these After-pains ought to be reliev'd or not; and it appears to be ridiculous at first Sight to put it; for what can be more natural than to shun or take away what is foreign to Nature, or to remove what is very troublesome? but many are of Opinion, that these Pains are of Use to continue the Cleansings, which, in a moderate Degree, is true; but if they exceed, they bring on malignant Fevers, Phrensies, and many other deadly Symptoms, wherefore are they to be remov'd as they exceed in any measure: We see then, that as Physicians differ in Opinions, we must apply to the Touchstone to distinguish between Men. There are some who can describe a Disease perfectly well, and all its Causes also, but when they would cure a Patient, they must have Recourse to their Books. Others there are, who rely so much on Experience, that once they know the Disease, they never inquire into its Cause, but prescribe at all Hazards; and there are others who give Reasons for all they are told, but when they come to the Cure, they leave you in the Hands of Providence, and these understand nothing of the Matter. None of these ought to be trusted in Practice; for no one
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who is ignorant of Theory, or of Practice, no one who cannot make use of all his Powers, who cannot call in his Intellects to the Assistance of his Memory, and *vice versa*, is fit to practise this noble Art: but pardon this Digression. In *Costiveness* it is not safe to make use of Catharticks, for fear you raise Disturbances; gentle Laxatives, or Suppositories, are sufficient; we ought never to exceed an Infusion of Sena, or Manna. If the Milk Fever should chance to turn into an intermitting or continual Fever, we must have regard to the Nature of it, and in general we must make use of gentle Diaphoreticks, not the most volatile, such are Roots of Contrayerva, Rue-leaves, Marigolds, Testaceous Powders, such as Crabs-Eyes, Pearl, Gascoign's Powder, and the like; but if we use too volatile Diaphoreticks, there will be Danger of inflaming the Womb, by forcing the Humours too violently upon the Parts, that cannot as yet circulate the Humours freely, and then they must stick in them, and hurry on Abscesses, or Gangrenes. Having brought Women thro' their Pregnancy, and their puerperal State, it will be expected I should also speak a Word or two of the Management of their Babes, which Duty I shall perform with great Pleasure; but first I shall make some Observations on the Manner of the Child's being nourished, and of its *Meconium*: As to what relates to the Nourishment of the *Fœtus*, it is done by the Mother's Blood; for the After-Burden, which is a soft
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and fleshy Substance, is an intermediate Body placed between the Mother and the Infant, and fix'd to the Womb; neither is it fasten'd to every Part of it, but only to a certain Compass, both for the Security of the Child, and for its own; and the Mother's spermatick and hypogastrick Arteries pass thro' certain Tracks of it to bring Blood into its Substance, and to nourish it and make it turgid, and moreover and principally to carry, thro' innumerable Branchings, Blood to the umbilical Vein of the Child, and this carries Blood to the Child's Liver, and the Child's umbilical Artery carries back Blood to the After-burden and the Mother; and thus whilst the Child is fix'd to the Womb, one may say, they have but one animal Life. The Blood being brought in this manner to the Liver of the Infant, it is carried by the Course of Circulation into the *Vena cava*, which all know goes out of the Liver up towards the Heart, thro' the Hole commonly call'd *Foramen Botallicum rotundum*, placed a little above the right Ventricle, into the pulmonary Vein, and from thence it passes into the left Auricle and Ventricle, and by the Contraction of the Heart into the great Artery: the remaining Blood enters the right Ventricle, and from thence by the Contraction of the Heart it is driven into the pulmonary Artery, passing thro' the Hole call'd *Foramen Ovale*, and so immediately into the great Artery call'd *Aorta*. And thus is the Blood carried into the Cavities of the Foetus's Heart, without

out passing from the Heart into the Lungs, or from the Lungs into the Heart, as it is in Adults, or even in Children newly born. It can't be denied, that some small Part of the Blood passes into the Lungs out of the right Ventricle for their Nourishment, but then the Quantity is but small, and its Circulation is slow and gentle, nothing like that in grown People, where the whole Mass of Blood passes with great Force. The Blood being driven out of the Heart, passes on to every Part of the Body, as it does in Adults; its smooth Particles stick to the Walls of the Fibres, and nourish them; some Parts nourish the After-burden, and the Remainder is brought back into the Mother's Body thro' her hypogastrick and spermatick Veins. The umbilical Vein therefore is the original Cause of Nutrition in the Fœtus: It is true, that some imagine, and not without Reason, that the Liquor in the Coats serves the Embryo also for Nourishment; and this the rather appears, because Childrens Mouths and Stomachs are full of it; some, indeed, believed there was no Coat for holding the Fœtus's Urine, and therefore thus affirm'd, that this was blended along with the Colliquamentum, and so became excrementitious; these deny this Opinion, and strengthen their Sentiments by saying, there can be no Suction but by the help of Respiration; but Children did not breathe in the Womb, as appear'd by such a Compactness in their Lungs, if dead-born, that they sunk in Water. So that the

Fœtus

Fœtus is nourish'd both ways; the Holes call'd the *Foramen rotundum*, and *ovale*, as soon as the Fœtus is brought forth, are closed up, and the Course of the Circulation is changed, and all the Blood is afterwards carried thro' the Lungs: The Reason of which Change seems to be, because that Blood, which used before to be carried into the Placenta, or After-burden, and from thence back again into the Mother's Vessels, is now restrain'd, the umbilical Vessels being cut and tied, within the Child, and is increased in its Quantity, as well as grown more heterogeneous; it is press'd forward by the Access of the Air, which has expanded the Lungs, and by that Expansion given them Bulk, and has open'd Vessels which before lay complicated and folded up, so that the Blood having a freer Flood-gate open'd, the others, namely, the Holes, become of little or no Use at all, and do therefore, for want of Liquors to pass thro' them, fall flat together, as is usual with flexile Pipes thro' which Water can be press'd, and never being useful any more, do grow together, and become mere Ligaments. From the Remains of a Lymph, which the Children suck and live upon, out of the *Colliquamentum*, or Waters, from the Bile which is separated by the Gall-Bladder into the Guts, and from the pancreatick Juice that runs in thither also, are made up a black and greenish Stuff, which all Children are found to have within them when born, and which they either do void, or ought to be made so

to

to do ; this Stuff is call'd *Meconium* by the Physicians, because it refembles the Juice of Poppy boil'd into a Confiftence ; to the heaping up fuch a Matter the flow periftaltick Motions of the Guts contribute much ; for in Fœtus's, for want of Refpiration, this Motion muft be very weak, refembling that of the Bladder only ; and therefore is this Stuff eafily conceived to ftay in their little Guts, till they are born ; the moft limpid and liquid Part of the Waters is carried into their little Lacteals, and fo on into their Blood, and the groffer and congeal'd Part of it is thus accumulated within them : moreover, it happens here, as it constantly does in our Veffels, namely, whenever the Veffels are too full, they lofe their Power of Contraction, and therefore as the Guts are quite fill'd with this Matter, they ftretch on, and hold all they receive, till the Child is born ; and then the Air rufhing into their Lungs, and preffing down their little Diaphragms, the Guts are put into a true periftaltick Motion, and this Matter begins to move off downwards ; the long Stay this Matter made in the Guts, gives it a Compactnefs, and the Sour Children abound with, give the bilious Part of it a Blacknefs, and this is the Reason of its black Colour. Yet notwithstanding the Acidity that this Matter contracts by its Stay in the Guts, in a natural State, none of it is thrown into the Womb : but fometimes this has happen'd, when the Meconium chanced to be fharpier than ufual, or when

when the Sphincter of the Fœtus's Anus was paralytick, or some other Disorder happen'd in its Bowels; so that altho' it should, as it does, make Water thro' the *Urachus* into a proper Membrane, call'd *Allantois*, yet this does by no means infer a Necessity of its going to Stool there; for it is to be observ'd, that the Bladder of a Fœtus is very small, and incapable of holding any large Quantity of Water; so that as its Flux is continual, there is a Necessity, lest it should burst, of its flowing perpetually; but the Length of their Intestines is pretty nearly equal to the Length of Adults, wherefore they can contain a large Quantity of this Matter, without running this Risque: Moreover, the Urine, as it is very thin and sharp, imprints a greater Force on the Sphincter of the Bladder, than the *Meconium*, which is very viscous and glutinous, and therefore is more fitted for stopping its Efflux, than to stimulate the Bowels; nor will the Juice it receives from the Gall-Bladder provoke its going downward, since that, in Children, is waterish and diluted; but so soon as the Fœtus is born, the Air blows up their little Lungs, presses down their Diaphragm and Bowels, and squeezes the Guts, so as they can't contain it longer, and then they begin to discharge it; or if they do it not freely enough, the Midwives cause them to take Oil and Sugar together, or Oil of Almonds and Syrup of Roses, in order to disengage it from the Guts, to which it is apt to stick: It were better not to feed them, till

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this is all discharged, and then they ought to be fed with Pap, or with their Mother's Milk, if Pap does not please them : But before I give further Directions concerning the Management of Children, and the Nature of Milk, I shall crave leave to digress a little about the Secretion of it ; The Mother's Milk is therefore Chyle separated thro' the Glands of the Breast into Ducts, as into a Reservoir, which is suck'd out at pleasure ; this Juice is composed of very different Parts, namely, watery, cheefy, oily, and spirituous ones ; however, there cannot be very much of the latter, or the Nurfes could not suffer so considerable a Quantity of it, without losing their own Spirits ; and yet it can't be supposed to be altogether void of them, or it would be useless for the Nourishment of the Infants. The Serum of the Blood is not the Matter from whence the Milk comes, nor yet is the Blood its *Pabulum*, but it is mere Chyle ; heretofore, it was reputed Blood, because Milk never used to be in the Breasts, till the menstrual Flux was obstructed, and there they thought this Blood found another Passage, and was carried by the epigastrick Arteries into the mammary Veins, and there was converted into Milk ; others entertain'd other Notions, but wide of Truth : It is true, that the Blood in the Time of the Menstruals is more in Quantity, and moves faster on in the Vessels ; now if the Blood thus consider'd, arriving at the Womb and *Vagina*, as destin'd for its Secretion,

finds

finds a Difficulty of passing, upon any Occasion whatever, it necessarily follows, that it will be driven with Force, and more copiously, to other Parts of the Body; and in this Manner, being often loaden with Chyle, it may be carried to the Breasts, where gradually dilating the Arteries and Ducts of the Glands, it fits the said Glands for the Secretion, first, of a thin Lymph, and lastly, of milky or chylous Particles: It does often happen, that Blood appears instead of Milk, and this help'd to confirm many in their Error, that Milk was made of Blood; but this only proves, that the Blood is too thin, or that the Glands are too much relax'd, and that sometimes the Child is so strong, and the Mother's Fibres so dilated, that it can hardly happen otherwise; nor is the turgid State of the Breasts any stronger Argument for this Conversion, since this only conveys the Chyle thither also: As to Children having Milk often found in their Breasts, this might have some Weight against such as deny that Infants are nourish'd with Colliquamentum, or the Liquor in the Membranes, but none against us at all: Moreover, Blood never returns into Chyle, but often into purulent Matter; the Order of Sanguification is this, to wit, the Victuals turn into a milky Substance, call'd *Chyle*, this turns into Serum, this into Blood and Spirits; and it is not Nature's Custom to have her Order revok'd. Having thus explain'd what Milk is not, we are obliged to shew you what it is; and it may
readily

readily be proved to be Chyle, by the following Arguments; first, it is so like it, that we have Reason to believe it nothing else; secondly, it is composed of oily, watery, and caseous Parts, as Milk is; thirdly, the Taste and Smell are the same; fourthly, it assumes any Taste, which you give to the Chyle, so by impregnating the Chyle of the Nurse with Rheubarb, or any other Remedy, you purge the Child, or cure it of Convulsions, and other Diseases, without obliging the Child to take any thing by the Mouth; and this, by the way, is an excellent Proof, that Purgatives pass into the Blood, and work by giving Irritations to the Glands of the Intestines that way, as well as by stimulating the Guts immediately: which the Colours Rheubarb or Saffron give to the Nurse's Milk, do also confirm; and a certain black Powder was given in a certain Case to a Nurse, which communicated its Blackness to her Milk. Moreover, don't we experience, that Milk abounds, or is wanting, in Proportion as the Nurses feed or starve themselves: The Stomach extracts a sort of Emulsion out of the Victuals, which is further digested by a Mixture of Choler and the pancreatick Juice, the liquid Parts descend into the small Guts, and are strain'd thro' the Mouths of the Lacteals, and circulate thro' Glands and Lacteals, till they arrive at the Reservoir of the Chyle, from whence it ascends up thro' a Duct to the Veins and Heart, and from thence into the Arteries and Glands of the Breasts, and there it is separated;

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rated; the Chyle, upon bleeding immediately after Meals, is seen to swim upon the Blood, and 'tis even ting'd with yellow, by either Rheubarb or Saffron. Experiments have prov'd this Passage to be the true one for Milk; for by injecting Quicksilver thro' the Artery that comes to the Breast, it came out at the Nipple, as also did a certain Spirit ting'd with blue; wherefore this is certainly the Passage, by which the Milk is separated: These Experiments prove the Contrivers of other Passages, to be in an Error; moreover, no other Ducts have as yet been found. The only Argument against this Secretion is, that so much Milk could not be secreted from the Chyle alone, because Suckling-Women do daily afford about two Quarts of Milk; but this Difficulty is readily answer'd, that there are in the Space of one Hour above Four thousand four hundred Pulsations, more or less; the Blood then must arrive so often at the Glands; suppose then one Drop were secreted by the Glands at each Pulsation, you will have in an Hour eight Ounces of Milk, more or less, according to the Woman's feeding or fasting. And that we may the more readily find out how this Secretion is perform'd, we will examine the Glands themselves, which are Arteries interwoven together, and lengthen'd into Tubes, which are accompanied with Nerves, Lymphaticks, and Veins; these Arteries meet at last in a Bundle, and make a great Number of Ducts, call'd the Nipple, from whence the Milk spouts out; the

the Nerves serve to give the Arteries Spirits to support their Elasticity, and the Lymphatics and Veins reconvey Lymph and Blood into the Mass of Fluids, where too much is afforded, or, at least, where more is brought than can be dispens'd. There is no Repository for the Milk, or any Reservoir to keep it in, it is all contain'd in the Arteries and Glands; and when Nurses feel so great a Distension in their Breasts, and in the Parts adjacent, all the Arteries are distended to a great Size, and unless the Milk returns, there is no other Method to get rid of it, but to suck it, or milk it, otherwise it will be apt to break the Vessels containing it, and then it curdles, and turns into an Abscess. There is a Difficulty to know why Women that are with Child only should have Milk, and not others, or Maids; to answer which, I presuppose, that there is a Rarefaction occasion'd in the Blood by Conception, and after the Placenta, or After-burden, is fix'd in the Womb, and a little before the menstrual Flux is suppress'd, according to the Course of Nature; the Quantity therefore of Humours abounds in the Vessels, and where there is the least Resistance made, those Vessels are surely dilated, and the more Pregnancy advances, the more is the Womb distended, the more therefore are the yielding Parts dilated with an Influx of Juices, because their Descent is hinder'd from the Compression of the Womb on the Vessels; therefore Milk fitting these secretory Ducts best, Milk is se-

creted into the Breasts : and why Milk should abound in Womens Breasts more after Labour than before, is, because the Flux is augmented thither by the Suction, and some other Causes, which are too long to enumerate. Having made this Digression on the Passages, and Generation of the Milk, we may say then, that this Nourishment is, of all, the most natural for Children, since it is much of the same Nature of the Colliquamentum, they live on whilst in the Womb ; and if they are brought up by the Hand, Milk itself warm'd, and not made too thick, is certainly the most agreeable to their Stomachs : In like manner, all their Victuals they take, should be thin and nourishing, and easy of Digestion, such as Bread and Water boil'd thin, mix'd with a very little Salt amongst it, and the like.

Feeding Bleeding being so frequently in Use amongst us in *England*, and this Discharge being either of great Advantage or Damage to Mankind, it can't be amiss in this *Directory* for Health, to shew the Readers in what Cases it may do Service, and where it will be prejudicial. If it behoves a Physician to be prudent and cautious at all Times, and in all Places, and in the minutest Points, in his Practice ; as well for the Sake of his Reputation, as for the Satisfaction of his Conscience, which he ought to keep unfoil'd before the great Tribunal : If in his Actions no Experiments ought to be made upon the Sick and Infirm, but such as he has found useful, and such as Reason dictates to him ;

him ; who can deny, that this Caution is mainly to be observ'd, with Respect to Bleeding, and drawing away Blood ? For there is no Sort of Assistance in the whole Compass of Physick, that has so noted and sudden an Effect in taking away, or encreasing Diseases, or, to speak plainly, that being opportunely and judiciously call'd into Practice, can sooner restore us to our pristine Health, or, being imprudently and injudiciously done, can destroy it, and even carry us off, than Bleeding. And, in truth, whoever seriously considers this Affair, will not much wonder at this Assertion ; for the same does not happen in Bleeding, as in other Discharges ; because what is empty'd out of the Blood-Vessels, that is, out of the Veins and Arteries, is not excrementitious, as it frequently is from other Parts, nor ought it be drawn off at all, unless it were for the Preservation of Health ; since this Fluid is the Liquor of Life, and that in which Life resides ; so that it is very easy to judge, that no Error can be committed here, but Life is in Danger, as it often happens ; and therefore *Celsus*, speaking of Remedies, says of Bleeding in an Apoplexy, that it also agrees in many other Diseases, but that it either destroys or cures. Since therefore Errors, which are generally grievous and dangerous, in this, if any where in Physick, are to be regarded and avoided with all Care and Diligence ; I have thought that Bleeding, now so commonly made Use of in all Families, was worthy of some Notice,

and deserv'd some Rules laid down for it : I shall therefore shew its Uses, by reciting in what Cases it does Good, and also its Abuses, by bringing and setting before you in what Diseases it may do Harm. By Bleeding therefore, without wandring out of the Road, or without long prefacing, I don't mean any other than what is done by the Surgeon, or his Deputies, the Cuppers ; or any other than what is taken off by the Lancet, or Scarifications, under which I comprehend also the opening of an Artery, of which I shall, at the End of these Remarks, touch a little upon. Every one knows, that drawing off Blood from the Vessels, has often, in a remarkable Manner, been of Use to those press'd with Diseases ; and even has been found necessary to recover Health, or to establish it when it was in a doubtful way, which, moreover, daily Experience, and the Nature of many Diseases, with the Advantages that many sick People have obtain'd by it, have sufficiently testify'd. And surely, if we seriously weigh what happens to the Blood in drawing it off, it will not be difficult to conceive how many Vitiations that are in this Fluid, both in the Vessels and without them, are amended and corrected, or totally taken away by Bleeding alone, as the most present and powerful Remedy ; for in every Discharge of Blood, made on what Occasion soever, or what Purpose soever, because Blood, whether pure, or vitiated and corrupted, such as it is in the Vessels, is drawn, even that
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which remains after Bleeding in the Vessels, by this Evacuation, is apprehended to be chang'd in various Manners. Since it is evident by this drawing Blood, first, that its whole Mass is somewhat lessen'd, and that part is subtracted from its Plenitude and Quantity. Secondly, That the Blood runs with more Violence and Force to the Part where the Vein is open'd, than to any other. Thirdly, That upon its running towards the Orifice with greater Rapidity, the whole Mass has a greater Velocity impress'd on it, and the whole Blood in our Vessels is swiftness mov'd than before. Fourthly, That, upon Bleeding, the Blood must either grow warmer or much cooler, and that we either are more feverish, or refresh'd after bleeding : It grows warmer, if we don't draw off so much as lessens the Attraction of the Particles or Globules to each other ; but cooler, if that Attraction be lessen'd. This being premis'd, as being Things observ'd, or to be observ'd in every Bleeding, as the Foundations and Props of what I am going to advance about it, it will be convenient to build the Whole upon them, to determine by them when and how Bleeding is proper, in what Cases it has a Place, or in what Diseases it conduces. So long as our Blood remains sound and under a natural State, or contains within its Banks and Channels appointed by Nature ; so long as it conveniently answers the Ends of performing the Circulation and Secretions, and all the other Actions expected

from these ; that is, so long as it observes duly and perfectly the Order prescrib'd by Nature, in its Quantity, its Quality, its Motion, or its Place, it is certain that it ought not to be drawn out of the Body ; or, at least, this can't be done but at the Expence of our Health, or the Loss of Strength. But it very frequently happens, that it evidently recedes from that Mediocrity, and does not keep Measures with the Quantity and Quality agreeable to Nature, that having contracted vicious and deprav'd Qualities, it departs from that Purity which Nature requires ; so that then it may justly be reputed the Cause of all the Ills that infest Mankind. That I may illustrate the Affair we are now about, with Examples : It is known that the Blood in a Plenitude, by Reason of a long Series of good and wholesom Food, and other Causes, call'd plethorick Causes, does much exceed its just and due Measure of Quantity, and does therefore distend the Vessels excessively ; so that, unless a timely Subtraction of Blood be made, we are brought under great Hazards of Life, and even are carried off suddenly : for as in this Plenitude so great a Quantity and Load of Blood abounds in the whole System of the Vessels, it follows of Course that they will be fill'd and distended beyond their natural Tone ; which being so replete and stuff'd, it necessarily follows, that the same Blood, being more weakly rarefied and mov'd in the Heart, from its lost and distended Tone, will be
driven

driven into the whole Channels of the Body more weakly and sparingly. By this Motion, thus abolish'd, or at least lessen'd, it manifestly appears why Anxieties, Difficulty of Respiration, continual Fevers, Breaches of the Vessels, Bleedings, ill Habits, Apoplexies, Swoonings, Faintings, Inflammations, Impostumations, and even sudden Choakings ensue ; hence have all Authorities allow'd of and advis'd to empty the Vessels in excessive full Habits : And altho' a Plenitude, if it be moderate, and without present Danger attending it, may be taken off by Fasting, or spare Diet ; yet, because there is present Danger in an excessive Plenitude, Bleeding takes it off soon and safely : for as in a Plenitude, proceeding from any other Consideration, there is no other Remedy but Bleeding, or no other Indicant, as Physicians say, besides the Quantity, and Plenty or Abundance, Bleeding alone suffices for lessening this Abundance, and for preventing all impending Ills from that Cause ; since by this alone, whatever Good or Advantage accrues to the Blood, and the whole Body, all is obtain'd, for from this Plenty all Ills are deriv'd, and consequently all Good must be imputed to Bleeding. For first, That Abundance of Blood being taken off by Bleeding, there is in an Instant Space enough acquir'd in the Vessels for the Renewal and Increase of Motion, then because the Ventricles of the Heart are more extended, by Reason of the Spirits freer Motion, and all the Particles
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of the Blood, which before were hinder'd in their Course, being now more freely mov'd, are more tofs'd and become rarefied, and the Blood being truly thinn'd, is diffus'd and mov'd with greater Rapidity in the Arteries, and thus both the circular and intestine Motion are wholly restor'd : and since the Blood's Quantity being lessen'd by it, the Vessels are no longer distended nor swell'd, the Ruptures also of them, the Inflammations, and all the Accidents above-mention'd, are in no wise to be apprehended. There is no Perplexity, in this Case, in determining what Vein is to be open'd to lessen the Plenitude, since it is little to the Purpose at what End we begin to empty the Vessels, so we do empty them, so the Patient receives the Benefit he proposes, and we satisfy the Intention we aim'd at. It is true indeed, in a Plenitude of the Vessels, that the Surgeon should chuse the largest and most conspicuous Vein ; but it sometimes happens that in fat Men, such a Vessel is hid under the Fat, in which Case any Vessel that appears may be taken and open'd. And it ought to be observ'd, that we need not delay or deliberate long on this Affair, for as a Plenitude, when it is complete and excessive, does not admit of Delay, and as it gives no Truce to the Sick, and carries off many in a very short Space of Time, a Vein must be open'd as soon as may be, and Blood must be drawn off according to the Nature and Measure of the Fulness ; so that we are nei-
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ther to regard the Time, the Place, or any counter Indicant, that forbids Bleeding ever so much, of what Nature soever it be. And I will add more in this Case, that is, in lessening a Plenitude, I commend a large Orifice to let out the Blood, as what will give a quick and free Passage, lest, if the Hole be small, the thinner and more subtle Blood may escape, and leave the grosser behind ; whereas if the Orifice were large, the Blood would flow out as it offer'd itself at the Vein, and the gross and subtle Part would be equally discharg'd, which is what is wish'd for. Many other Admonitions and Rules might be added, and such as the Physician should observe attentively ; but as they appertain not so much to the lessening of a Plenitude, as to Bleeding in general, I shall mention them anon, as they occur to me, first premising some Particulars in their proper Places ; and as the Blood, by its Abundance and Quantity, is the Occasion of a great many grievous Disorders ; so the same breaking out of the Vessels, and rushing into the Substance or Cavity of any Part, or making its Way out of the Body, throws Mankind into many and innumerable Calamities, and even destroys him : for we observe sometimes, that the Blood-Vessels are so dilated and distended either by the Abundance of the Blood, as it happens in a Plenitude, or from the Rarefaction and Agitation of it, or from Flatulencies, that whereas they can yield no further, it must follow, that they

they will break and open, or that they are corroded by some great Acrimony of the Juices, or of the sharp Edge of an Instrument; whence it falls out, that there is a Passage made for the same Blood, and it breaks out at the Pore it finds open; and in truth, the Blood used to be contain'd within its Vessels, being spilt in this manner out of the Vessels, that is, either running out of the Body, or stagnating and sticking either in the Substance or Cavity of some Part, cannot but hurry on the aforefaid innumerable bad Events to Mankind: And that I may illustrate this by some Example, we see in an Hæmorrhage, or Effusion of Blood, of any Consequence, unless the Effusion or Violence of the Flux be check'd, either by Art, or of its own accord, in a short time, who does not know, that the whole Strength will decay and be destroy'd, as the Efflux advances to its last Pitch? which being exhausted, the Patient must of Course be undone, and die. And if we pursue this Matter further, and more exquisitely, if also we consider more attentively those Eruptions of Blood which usually attend and accompany Inflammations, that many Ills also must arise from that Blood variously vitiated, it cannot be a difficult Matter to conceive it. And that you may more readily comprehend, what Good Bleeding does, in taking off an Inflammation, I will beforehand describe its Nature; Since we have known in every Inflammation that is remarkable, first, that the Blood does rush, and is
spilt,

spilt, out of an open or broken Vessel, with Violence, not only into the intermediate Spaces between the Veins and Arteries, or into the returning Vessels, but also into the very solid Parts themselves : and since those Places into which the Blood is effused so plentifully, are both straiter, and less fit to circulate the Blood so suddenly into the Vessels again, it is a Consequence, that, secondly, the Blood is heap'd up and stagnates in such Place or Places, and that a Swelling must necessarily ensue, by reason of the Blood's constant Efflux distending them ; whence, thirdly, because that Blood rests so upon these Places, and thus, as it were, is stuff'd with it, so that it cannot repass from them into the Vessels, but must stand still there, it is not only changed, and does not only lose its former Nature and Condition, or State, but it is wholly vitiated and corrupted from the intestine Motion of the Particles, variously and violently agitated among themselves, and raising a Heat and burning Pain, by reason of the heterogeneous Bodies jostling against each other, and then the Parts of the Body, whether containing or contained, are corrupted and infected, and at last bring on a Mortification. It is not therefore to be wondered at, if also, fourthly, by reason of that intestine Motion of the Blood, stagnating all around, some subtil Parts, as well acrimonious as others, do continually fly off, and leave the grosser behind ; whether penetrating the Pores of the Muscles or Vessels, they mix with

with the recirculating Blood, and being brought to the Heart do continually stimulate it, and produce a vitious Effervescence and Rarefaction of the Juices, causing a more pregnant Pulse, Fevers, and other Symptoms proper to Inflammations, which we shall supersede the Mention of, as being foreign to the Affair in hand. But although it scarce is worth the while to shew, that Bleeding helps those that labour under Hæmorrhages and Inflammations, since the whole Faculty are agreed upon it, that it does; yet I hope it will not be ungrateful, but useful, if I endeavour briefly to shew how or for what Reason Bleeding answers the End, in taking off these Ailments. And as it appears from what has been said before, that the Blood offends in an Hæmorrhage after one Manner, in an Inflammation in another; and as the Blood in an Inflammation, to wit, if it stays long in the Parts, at different Seasons uses to undergo great Changes, it must also be confessed, the various Degrees of the same Blood standing still, or concerted differently, should be distinguish'd and observ'd. Whence also it is easy to conclude, that an Evacuation of Blood does not conduce in one and the same Manner in either Disease, or even in the same, nor is it useful at every Season of the Disease or Inflammation. And if any one consults Experience, the true Mistress and Governess in all physical Matters, or examines seriously what Effects Bleeding uses to have in Inflammations, he

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will doubtless observe, and all agree in this Point, that sometimes the whole Cure depends on Bleeding alone, and the Patient feels Relief the Moment Blood is drawn; but sometimes, on the other Hand, it will happen, that Bleeding repeated ever so often does no Good, but rather great Harm; and if any one enquires into the Reason of so different Effects, he will find, that they depend upon the Nature and Season of the Disease, that is, upon the Inflammation, which is either just begun, or is confirmed and rooted; from whence I also judge, that Bleeding does so far agree in an Inflammation, and that the Patient is deliver'd from it by it alone, as the Blood extravasated, is either not at all congeal'd, or but gently so, and does yet maintain a Communication with the circulating Fluids; so, for Example, if a Pleurisy arises from a Plethora, or too great abundance of Blood, then it is evident, from the Nature of a Plenitude it self, that not only the Blood, which has fallen in those Parts, I mean the Pleura and adjacent Membranes, and stops there for want of sufficient Room, is rendred unfit for the Continuance of the Circulation; but also that which is in the Vessels themselves, so long as that Plenitude subsists, is mov'd but slowly, and is impeded in its free Course. When therefore that Plenitude is diminish'd in proper Time by Bleeding, because by it, first, the whole Blood recovers its former and natural Motion and Freedom; also, secondly, it is driven

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more rapidly, not too forcibly, towards the Part affected ; hence, thirdly, happens it, in my Opinion, that it carries back that Blood, which it finds in the Way, or sticking in the Membrane affected, as yet being fluid and moveable, into its Vessels, by Virtue of that Afflux it excites a gentle Motion, or impresses some Motion upon it ; and in this Manner, no other Impediment accruing, it preserves the Blood pure and free from Corruption (which before stood still, but now is brought into its Vessels again, and restor'd to Motion) and preserves also and frees the Membrane that covers the Ribs, which before was fill'd and distended with the abounding Quantity, from an Inflammation, that otherwise would happen : But as to what relates to Bleeding, or its Effects and Manner of Acting in other Inflammations, bred from other Causes, that I may be brief ; I confess, indeed, that they are very different from this which I just now mentioned, as to the various Causes, and the various Manner of their Generation ; neither do I deny also, that the Blood is mov'd differently in them, according to the Variety of their Causes, namely, in that which proceeds from a Plenitude, both before and after its Efflux into the Substance of the Part, it moves more slowly ; but in that which arises from other Causes it moves more rapidly and violently ; mean while, the thing is self-evident, that there is the same Reason for Bleeding in both Cases, for the Blood is return'd into the

Vessels

Vessels in both. But that I may open my Mind more distinctly, and comprehend the Whole in few Words, I think that the Effect of Bleeding, and its Manner of operating in all Eruptions of Blood into the Substance of any Part, is so far the same, as Bleeding so moderates and changes the Motion of the whole Mass, whether diminish'd, or encreas'd, or more powerful, that it brings it to some Mediocrity, according to the Quantity of Blood drawn off, and sometimes it produces a greater and more rapid Motion, as in an Inflammation rais'd from thence, sometimes it checks and stops its Force and Violence, as in Inflammations rais'd from other Causes : For as that Blood which stagnates and stops in the Part, cannot recirculate into the Vessels, by Reason of the diminish'd Motion of the Blood in a Plenitude, even after its Effusion into the Part ; and as the same deposited on the Part, by Reason of its impetuous Motion, being press'd by the Blood flowing constantly very powerfully and plentifully, and therefore finding no Passage, it must be gather'd and accumulated in the same Place, and the Evil must in this Manner be encreas'd ; it follows, in my Judgment, that the Advantage which accrues to the Inflammation from Bleeding, must be conceiv'd to be plac'd in a mean and natural Motion, or in a Motion less and more gentle than the Natural, and not in any Extreme, that is, not in a defective or an excessive Motion : Which Things being propos'd

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and explain'd, the other which I spoke of, must be perspicuous and clear to any mean Understanding : Why, to wit, an Inflammation of many Parts cannot be taken off and conquer'd by Bleeding alone ; and the Blood, render'd deprav'd and sticking in any Part, be restor'd to its former Condition, and Integrity or Soundness ; and by Consequence drawing off Blood will so far fail of being advantageous, as our Hopes are plac'd in it alone. For if the Blood, which is pour'd out so plentifully into some Part, and stands still there for some Time, either by reason of some subtile Particles lost, and which are requisite for its Conservation, or by reason of the Particles also remaining, but unfit for Motion, from the Straitness of the Place, should become very gross, and therefore should be, as it were, driven into the Part ; who does not readily conceive that the same cannot be mov'd or thrust further into the Vessels, nay, must be made unfit for circular or progressive Motion, by reason of its Thickness occasion'd from the Blood flowing constantly to the Part afflicted ? and so the Evil does not only remain, but moreover encreases with the Time, and the Patient is more afflicted daily. I own indeed altho' Bleeding alone is insufficient many times to complete the whole Cure, it does not, however, always happen that Blood is drawn in vain in Inflammations ; I think it may safely be affirm'd, that Bleeding, to wit, then is useful, so far as it procures some Relief,
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not that it eradicates the Disease ; for if this were true, it would always, without fail, diminish it at least, which, however, it does not effect, therefore it profits inasmuch as it draws the Heat of the Blood into another Channel than that of the Part affected, or as it removes the abounding Part, which was an Impediment or Obstacle ; which remaining, without doubt there would be Reason to apprehend, that the Blood, being first congeal'd, being now dissolv'd by inciding Remedies, and being return'd into its Vessels, and a freer Passage being made for the whole Mass through, as well as to the Part affected, the remaining Blood, and that which is nearest to the Part, may run into it with the same Force as formerly ; and so one Evil being remov'd, another such like, equally grievous and dangerous, would be produc'd and succeed ; and so Bleeding cannot properly be call'd the efficient Cause of the Cure, but the Cause without which the Cure could not be effected. But as in this Affair we don't consider Blood as abounding, and its Diminution in that Sense, as it happens in a Plethora or Plenitude, but as offending in Motion, and correcting it by diverting it into another Channel, and so hindring its Influx ; it also ought to make us solicitous about the Vein that is to be open'd, and the Part of the Body from whence it is to be drawn. Now it is known, even to those who have but just enter'd the Threshold of Physick, that this Manner of Bleeding was term'd by the Antients

Revulsion ; which, how contrary it is to the Nature of the Thing, yea, how impossible it is, may readily be conceiv'd, because the Circulation has destroy'd the Meaning of the Antients. Mean while this Opinion about *Revulsion*, however distant from the Nature of the Thing, may well be born from the Antients, who knew nothing of the Circulation of the Blood ; wherefore retaining the Name of *Revulsion*, we will explain it so as to agree with the Circulation itself. By *Revulsion* then we don't mean a drawing back of the Blood that has flow'd to any Part ; or rather a Return of it by the same Vessels, so that by this Means a contrary and opposite Motion is given to the Blood by Bleeding, but the Determination and Direction is chang'd, and its Course is prevented from running to the Part with that Violence as formerly ; Therefore, that we may assign the Place where we must bleed for *Revulsion*, whether in Inflammations, Hæmorrhages, or the like, I think that then it will succeed best, if some remote Vein, which is diametrically opposite to the Part affected, be open'd ; and from it let Blood be drawn, as much as the Nature of the Fluxion requires. So, for Example, that a general Rule may be given to judge of particular Cases by, if the Arteries of any Part affected take their Rise from the ascending Trunk of the great Artery, call'd *Aorta*, any Vein may be open'd that rises from the descending Trunk of the *Vena Cava* ; for by this Means the Force of the Blood

Blood is drawn, as it were, with Violence from the affected Part, and is compell'd to run more powerfully and rapidly towards the opposite Side : If, on the contrary, the Place affected has Arteries rising from the descending Trunk of the great Artery, the contrary must be done, and a Vein must be open'd in the upper or ascending Trunk of the *Vena Cava*. And that this Method of drawing Blood in Revulsion is the best and safest, if we consider the Nature of the circular Motion of the Blood, the Affair itself admits of no Doubt. For who is he that is ignorant, that the Blood finding a freer Passage, whether by Art or Misfortune, is carried to the Orifice more rapidly. In such a revulsive Bleeding then we gain a double Advantage ; for first, we lessen the whole Mass of Humours, and the whole Matter in Motion, with one and the same Opening, that would otherwise run towards the Part affected, and we lessen also its impetuous Motion by it ; then we lessen the Blood's Heat, and change its Course into an opposite one, and diminish its Shock against the diseas'd Place. This Manner of Acting is so agreeable to Nature, that our very Clowns have some Notion of it, and act accordingly upon their Occasions ; for I have known in the Fens of *Lincolnshire* and elsewhere, where the Autumnal Season makes the Country to overflow, and break down all our Fences, that the People have made Drains by breaking down their Dykes elsewhere, which being done,

they find the Waters to lessen upon them by this Draught, to some opposite and distant Corner. But lest we should seem to want Examples in Physick itself, how often do Physicians command Bleeding in the Foot, where Women have been depriv'd of their menstrual Flux? For this End, forsooth, that by this Means, a Force being impress'd on those Parts, the Motion which had been deficient may be promoted again: If, on the contrary, it should happen that this Flux should prove troublesome to Excess, they open a Vein in the Arm, to invite the Blood's Motion thither, and hinder its Descent: For this Reason *Hippocrates* prais'd Cupping Glasses to be apply'd under the Breasts, and I have known them very effectual in the Case. But it must be noted that this revulsive Bleeding ought not to be made use but in the Beginning of a Defluxion or Inflammation, (altho' in a Hæmorrhage at all Times, if the Strength bears it) when the Blood, to wit, is yet under a great Commotion, and continues to flow with Violence to any Part: for after its Violence is quite check'd, we make no farther use of Revulsion, but of Derivation, which is properly a drawing off Blood from some neighbouring Part, which is as yet uncongeal'd, and is yet fluid and capable of being circulated, altho' it in some measure stagnates. It must also be observ'd, that Derivation is never to be made use of, but when Revulsion has preceded, and the Blood's Commotion is quite abated,

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or that there is no further Fear of its being put into Disorders ; for if Derivation is made, without premising Revulsion, there happens a greater Rapidity to the diseas'd Part, and the Evil, increas'd by a new Fluxion, becomes worse and harder to be cur'd. Hence is it manifest, in my Opinion, that those Men don't act prudently, who, in the Beginning of a Quinsy, are accusom'd to draw Blood from the Tongue at the first Attack of it, to derive the Blood from the Part affected : since there is no doubt, but by this Means they increase the Flux of Humours thither, and by such a Mistake they promote the Swelling, in place of lessening it ; and lest any one should think it the same thing, at what Time of the Fluxion this Derivation is to be made, after the Blood is observ'd to be no longer in Motion, or to be congeal'd, we must refrain from it entirely : for if it be quite congeal'd, and so sticks and stands still in the diseas'd Part, it is in vain to seek Assistance from Derivation, to remove it from the Place, because it is then unfitted for Motion, and will yield to nothing but Discussion, or some particular Discharge. As to the Place where Derivation ought to be made, it must be observ'd, that it ought to be near to the Part affected, and such a Vein must be open'd as communicates with the diseas'd Part, and is inserted into it ; for by this means the Blood that stagnates in the Part affected being driven, by the remaining Blood that flows thither powerfully and in Plenty, again

into the Veins, is compell'd by this Law of Nature to repass into the Veins, and to tend every where with the whole Mass, and so renew the former Course of an interrupted Circulation. Some also command Bleeding, that they may divert the Flux of Humours from the Place affected, and draw it into another Channel ; and this they don't pretend to call a revulsive, but a divertive Bleeding ; so, for Example, if the right Arm be seiz'd with an Inflammation, they draw Blood from the left Foot, and not from the right, and thus they form a different and new Sort of Opposition, as they imagine : But this comes to the same Thing, and it is of no Consideration whether Branch, right or left, be open'd, since each Iliac Branch arises from the Trunk of the great Artery, and from the same Fountain, as we may say, and draws all the Blood it contains from the same Channel : So that they seem to me to multiply Cautions without any real Foundation. Sometimes also Bleeding is order'd by Physicians, when there is an Occasion to cool, and refresh the Blood, that is under a great Tumult and Heat ; for in burning Fevers, whether they be continual or intermitting, what is more customary ? And as it is manifest that the Choler in such Fevers does predominate in our Vessels, and as the same is very oleous and in plenty, and is also very pungent and acrimonious, and as it finds some acid Humours in the Vessels also, to which it is contrary in its Properties ; what can

can follow from the Concourse of these Liquors, that are so active upon each other, besides Heat and Burning, the constant and stable Concomitants of Choler, no less intolerable to the Sick, than prejudicial to the Body ; inasmuch as, by reason of the excessive and powerful Distension of the Vessels, arising from such a Rarefaction, the Vessels threaten a Rupture? Bleeding therefore helps this Fault immediately : I own that Bleeding is not always requisite, when such Heat and Burning reign in us, because the same End may be obtained by such altering Medicines as do more safely and agreeably temper this Heat ; mean while, because there is often Danger from the excessive Rarefaction of the Vessels being broke, and because there is Hazard in Delays, it is convenient to seek Relief from Bleeding, as a speedy and an immediate Assistance for the Extinction or Lessening them : And Bleeding is so much the more preferable before other Remedies therefore, as by that Discharge alone we answer many Intentions at one and the same Time : For first, by it some Part of the Mass being drawn off, it necessarily follows, that the Vessels, which were before loaden with Blood, must forthwith be emptied, and by that Means must the Diseas'd be free from the Danger of a Breach of the Vessels : Secondly, by this Operation, not only the Blood, but also some of its vitiated Particles, that is, of the oleous and acrimonious ones, mix'd with the Blood, and creating those
burning

burning Heats, must be carried out of the Vessels: Thirdly, and as Choler abounds, it is likely more of it, than of true Blood, will be discharg'd: And, lastly, the very Air may enter the Vessel, and contribute to refresh the Blood; and thus it will be no great Wonder, if the Cause of all this be taken off, that the Effect should cease, and the Diseas'd should be cool'd and refresh'd, and the Blood should be hindred from growing hot again. And as in burning Fevers I commend Bleeding as the most useful and convenient Assistance, so, on the other hand, I don't approve the Actions and Custom of those Physicians, who begin their Cure of any intermitting Fevers, of what sort soever, with Bleeding, making it too universal a Remedy, not in these, but in most other Diseases: For unless some Symptoms accompany these Fevers, whose Violence and Nature require Bleeding, to lessen them or to abolish them, it is certain, it ought not to be attempted: For Bleeding does never eradicate Fevers, as may be seen in Fevers with great Hæmorrhages attending them: I can't deny, but after Bleeding, some have been known to recover from intermitting Fevers, but then it cannot be asserted, that Bleeding alone had this good Effect; either Sweats must have ensued, or some Remedies have been given, that produc'd the Advantage. And, as in burning Fevers it is not all one at what Time Blood should be drawn, above all Things, the Re-

turns

turns of the Fits, their Duration, the Time, their Degree, their Declensions or Remissions, and Intermissions are diligently to be observ'd and distinguish'd by a discreet Physician. For, unless the Physician takes an exact Account of all these Things, and draws off Blood exactly as they indicate, how easily would it happen, that the Disease would not only be made worse, but also the Sick would be thrown into the utmost Hazard of his Life? since, to bleed in the Beginning of a Fit, or in its Vigour, when all Things are in Disturbance, would hazard the Patients, namely, in the beginning cold Fit, or when it is advanc'd. And therefore, left in an Affair of so great Moment, and with so great Detriment to the Patient, there should remain any Doubt, let us observe the few following Cautions: First, If any Fever should evidently intermit or return at certain Distances of Time, and should not constantly perplex the Patient, let us draw Blood away in the Time of the Fit: Secondly, If the Fever should not be intermitting, but should continually hold the Patient, yet so as to remit or grow milder at certain Times, then in the Height of being worse we ought to draw Blood; and lastly, If any one labours under a Quotidian or Tertian, or any such, Blood must be taken away in the Height of the Fit. And although a Physician may safely, and without Distinction, open any Vein; perhaps he will attain to his Ends more easily in cooling the Blood, if the

the Orifice be made somewhat less in this Case than at other Times; for by this means the thinner and more subtile Parts will escape, and the Fuel of the Heat will be discharged, rather than the gross Parts; and in this manner the Blood may be reduc'd to a natural State, and the Patient may receive some Refreshment. And as when any Vessel is broke, as in an Hæmorrhage, or distended too much, as in an Inflammation, the Blood is hurried to the Parts affected with greater Force and Violence; so, on the other hand, it sometimes happens, that the same is mov'd through the whole Body, if not with a deficient, at least, with a diminish'd Motion, and with much less Force than usual. This is not only evident in Faintings and Swoons, or Hysterick Cases, which are known and plain Examples, but moreover also, in different, sudden, and grievous Passions of the Mind; for Example, In a Fright, Joy, Anger, and the rest of the violent Passions, the same is so self-evident, that I believe no body, who pretends to the least Knowledge in Physick, is ignorant of that Matter: If we enquire diligently into the Cause of the Motion of the whole Mass being either abolish'd in us, or diminish'd, and some way impeded, (for I am willing to premise the Causes, which being known, we shall more easily understand what Bleeding will do); we shall find that it is twofold; the first, in my Judgment, is to be sought for in the Blood itself, or rather, in that Change which the Blood undergoes

goes in such a powerful Motion of the Mind ; and, that I may speak more clearly, in some Acid, that encreases with the Commotion of the Mind, especially if we speak of Fears, Apprehensions, Sadness, and the like, and fit to coagulate the Blood by its Nature, and by this Means to make it unfit for continuing the Circulation on foot, that is, proper for impeding or abolishing the Circulation. And let no one wonder, that I search for the Cause of this deficient Motion in an austere Acidity, since it is scarce likely that such an Humour can be bred in an Instant of Time, and to such an Height ; for besides that, some Symptoms, such as Anxieties, Gripings in the Bowels, Faintings, Heart-burning, and such like, usually accompanying such a Passion of the Mind, do evidently cause such an Acid to be generated ; the same thing seems to be evidently proved by some Men, who, otherwise sound, but seiz'd with a sudden Fright, do fall into a most grievous Epilepsy, which does often afflict them miserably for their whole Lives afterwards, Examples of which I have seen ; for, as many do confess, that the Cause of an Epilepsy is some acrimonious Acid, that stimulates the Nerves or their Origin, why also may I not here conclude, in some Passions, more-especially Frights, and such like, that some such Thing takes Place, by which the Blood does necessarily fall into Coagulations, and stands still or moves slowly, and becomes unfit for Circulation. Another Cause of this

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weak and impeded Motion, which, I believe, follows any grievous Passion of the Mind, I esteem to be ascrib'd to the animal Spirits, offending in various Manners in their Motion; to wit, being agitated and tofs'd with a confus'd and disorderly Motion, and that by a circular Motion in the Brain, or by being distributed to certain Parts more or less; for the animal Functions in these very vehement Motions of the Mind, are plainly vitiated, if we rightly consider what happens in such Men; since the animal Spirits are so sparingly dispers'd at that Time into certain Parts of the Body, that some do at that Time fall a trembling all over them, and also, sometimes, being seiz'd with a Giddiness, they can't stand, and, like dead People, fall and rush down, unless they be supported: But, on the other hand, they are sometimes so plentifully determin'd, and do flow so powerfully into some Parts, against all their Force and Inclination, that their Water and Stools cannot be retain'd. And as all know that a due Influence of the animal Spirits is requir'd to the Heart for the Expulsion of the Blood from thence; if these same, in these sudden Motions of the Mind, be either very sparingly or by an unequal Motion, or only by Intervals distributed to the Heart; who does not see, that the Heart will either be weakly mov'd and contracted, or not at all? and therefore, that the Blood will be less press'd and rarefied than usual? and that it will grow grosser, and contract a

Thickness?

Thickness? and that it will be driven forward into the Arteries and every where with a weaker Force? and according to the various Motion of the animal Spirits, more or less hindred, that the Blood will be more or less impeded or stopp'd in its Course? that it will move, and go forward more sparingly or copiously through the whole Body? And altho' of this Motion of the Blood, diminish'd in these Passions of the Mind, I have only assign'd two Causes; I don't, however, question, but the same may be hindred or lessened by opposite and contrary Causes, to wit, both by too excessive a Motion through the Heart, and by a more copious Influx of animal Spirits into the Heart; for it is probable, that the Blood, in Joy, is distributed so copiously into the Heart, and is there so powerfully mov'd and rarefied, that by its Plenty and Violence the Heart is overpower'd, and, by constituting a kind of Plenitude, that distends it too much, so that the Heart cannot be contracted without great Difficulty, and the Blood is receiv'd into the Arteries with an unequal Motion, and perhaps too sparingly. And as the Influx of the animal Spirits into the Heart being too excessive, and perhaps continuing in this violent Course too long, keeps it straitned, and forces its muscular Substance to remain too long in the same State of Contraction, every one must know how hardly the same can be unfolded and dilated, to receive the approaching Blood, that it may be

regularly

regularly circulated. . Wherefore, to correct this vitiated Motion of the Blood, and to hasten forward its lazy Motion, Bleeding is convenient upon many Accounts ; we must call, therefore, to mind, what I have already said, to wit, that the Blood always runs faster towards the Orifice than elsewhere ; whence it happens, first, that the Blood being brought with Force to that Part, the whole Mass receives this Impression, and contracts a quicker Motion also, and is thereby prevented from Coagulation ; secondly, the Blood having obtain'd a greater Degree of Motion thereby, the Heart is also more stimulated, by the Blood running faster through it, and is provok'd to a more frequent Contraction ; and, by the same Means, the animal Spirits, being hindred before, or at least vitiated in their Motion, or detach'd in a disorderly Manner, do again begin to move the Heart in a due Quantity, and to be distributed, according to Nature's Custom, into all the Parts of the Body. If, on the other hand, the Blood's Motion into the Heart be too excessive, as, I have said happens in Joy, then Bleeding produces the same Effect, in this disorderly Affection of the Mind, as I have shew'd it does in a Plenitude ; and the same Bleeding does so far correct the animal Spirits, that are brought too plentifully to the Heart, as the Blood being now more rapidly mov'd, it also passes through the Heart more impetuously, and obliges it, by Force, as it were, to a Distension, and reduces

ces the animal Spirits, by this Means, to their natural and reciprocal Influx, or their ordinary Motion, and now the Mind partly compos'd distributes the same sufficiently into all the Parts of the Body. And here it is to be observ'd, that this Bleeding in Passions of the Mind, does not avail, unless in the Beginning of them; and the sooner it is done, so much the more does it profit, and after they are settled, it is in vain to do it, the Patients receive no Advantage by it: Neither ought this to be wondred at, for after some Time, for Example, in such Passions, as are Frights, and the like, the Blood, by Delay, is condens'd and congeal'd, or acquires a Thickness, greater or less, in proportion to the Passion, so that Fault cannot be corrected or amended but by inciding Remedies, and by such Medicines as dissolve the Blood: Add to this also, that unless in extreme Passions of the Mind, for Example, in excessive Joy, Blood be immediately drawn, such are generally in Danger of being suffocated; yea, some, as physical Histories do testify, sometimes are presently choak'd, and dye miserably. But some, perhaps, may wonder, that I have made no Mention of Swoonings and the Hyfterick Passion abovemention'd; but I am not inclin'd to meddle with them here; for besides that, Bleeding is discommended in these by many, if not all physical Authors, it would be in vain to attempt it in the very Fit, since it is known, that the Surgeons lose their Labour in trying to bleed

People under Swoons ; wherefore I leave this Subject untouch'd, giving every one Power of Thinking or Acting as their Judgments direct them. And here it is not much to the Purpose which Vein, or in what Part, the Physician commands to be open'd ; for in whatever Place, or from whatever Vein Blood is drawn, its circular Motion, whether diminish'd or impeded, is restor'd, upon Condition the Orifice be made large enough, in the same manner : But if the Circulation be slower than usual in any one Part only, the same that we said was to be done in Derivation, obtains here : There are some also who don't cure the abovenam'd Disorders only with Bleeding, but also as often as Flatulencies are included in our Vessels, and abound there, and are the Causes of many Diseases, such as Palpitations of the Heart, Faintings, Swoonings, Convulsions, Epilepsies, Giddinesses, Megrims, and of other Diseases arising from thence, they believe that some Parcel of them is to be emptied by breathing a Vein, in order to expel them from the Blood ; and that I may in few Words comprehend my Sentiments about this Matter, as I don't doubt but many Diseases have their Rise from Flatulencies inclos'd in our Vessels and mix'd with the Blood, and some Pains, especially distending ones, depend often on them, being detain'd, and sticking to some Parts ; so also do I think, that then only Bleeding is convenient and useful, to wit, when the Blood abounds so much with Flatulencies, as that it is, in some measure,

sure, impeded and stopp'd in its Motion, or resembles a kind of Plenitude, and distends the Vessels beyond the Patient's Strength; or when the Flatulencies, sticking somewhere and dilating the Membranes, breed intolerable Pains; these *Flatus* happen in Blood circulated and agitated with too great Force against the Walls of the Vessels, and *Helvetius* has well observ'd in his late Treatise of the Animal OEconomy; that Blood thus circumstanc'd is very unfit for a circular Motion, and so had *Bellini* before him; and it is to be observ'd, that Bleeding may be of Advantage to the Patients, that Flatulencies ought to be either in the Blood, or at least, in the Interstices between the Arteries and Veins, or, as the Opinion now goes, between the Lymphatic Arteries and Veins; for if they infest any Part, where they can't repass to the Blood, Bleeding must necessarily be a Prejudice, and can be of no Service; and what occurs to be said on this Point, is the same we mention'd above on the Circulation, namely, as Flatulencies are either mix'd with the whole Blood or only inclos'd, and stick in some one Part or other; some Vein is to be open'd, in any Part, without Distinction, inasmuch as we may expect more or less Advantage, according to the Part affected. Blood is sometimes drawn off with Advantage, not properly with a Design to take off a Disease, or its Cause, or to deliver a Patient from his Disease, but that some urging Symptom from the Blood being over-

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heated, and violently attacking the Patient, may be lessened or quite taken away : By this Means we sometimes relieve many Inconveniencies ; for Example, an intolerable Pain of the Head, a troublesome Beating of the Temples, stubborn Watchings, insatiable Thirst, suffocating Heats and Burnings, a difficult and an impeded Respiration, a continual Agitation of the Body, a Distension of the Vessels, either from an Abundance of Blood, or a powerful Rarefaction, and such like, that oppress the Patient ; and as these Symptoms, violent as they are, ought to be refunded into other Faults of the Blood, and depend on them as their Causes, it is also easy to conceive how those Faults of the Blood, from which any urgent Symptom takes its Rise, being corrected and amended by Bleeding, the Symptoms themselves also must necessarily be mitigated and diminished ; since, when any efficient Cause is taken away or only diminish'd, it is a necessary Consequence, that its Effects will also be taken away or be diminish'd : So, for Example, if any urging Symptom takes its Origin from a Plenitude, or from too great a Rarefaction, resembling a Plenitude, or from any deprav'd Motion, or from too great a Heat and Fervour of the Blood, or from its Acrimony, or from Flatulencies bred in the Vessels ; upon Condition, that this Plenitude, or the Resemblance of it, can be taken off by Bleeding, or the Motion of the Blood can any way be restor'd or hindred, or its Heat can be
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reduc'd to its natural State, or any Part of these Flatulencies or Acrimony can be diminish'd by Bleeding, that urging Symptom also that took its Rise from this or that Fault of the Blood, must of Course be either mitigated or be quite taken away, as I believe all will grant me. I don't think I need to add any Thing here in particular, about the Time and Manner of abating Symptoms, for when any Symptom presses a Patient, then it is evident that this is the proper Season to relieve it; and when any Symptom urges, by reason of some Fault in the Blood, that is depending on the Blood, deprav'd in this or another Manner, who doubts but the Manner of abating it is to be sought for in managing its Cause, by taking that away, or by diminishing it. There is a Sort of Bleeding, by which Physicians endeavour to avert or repel Blood running in with Violence to any Part; for Example, as we naturally defend our Face with our Hands from any hard Body that would hurt it, to wit, we strike it back with Force; But this Sort of Bleeding is a ridiculous Opinion that has been maintain'd, since that is the Property of the Arteries only, namely, when we intercept, as it were, the Blood, flowing from some Artery by Bleeding, and divert it from any Part, which otherwise would have suffer'd the Shock of its Force; But I shall say no more of it here, since I shall speak of it below, when I speak of opening an Artery; and after I have added some Things

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that are observable in every Bleeding, I think it worth while also to subjoin some general Rules, not relating to any one Species, but to any Bleeding whatever, upon what Occasion soever, and for what End soever, to be observ'd always and every where, as so many Rules for acting or omitting it. Amongst which offers itself first, the Quantity and Plenty of the Blood in the Vessels; for, if upon any Cause whatever, or from any Disease whatever, or from any violent Hæmorrhage, or from Blood being lately drawn, the Blood is deficient in the Vessels, it must be taken off sparingly, but if upon some other Causes, it abounds, it must be drawn off plentifully; secondly, the Nature and Constitution of the Blood, for as the Blood is more or less deprav'd, is more or less thin, is more or less phlegmatick and crude, the Patient will bear a greater or less Quantity to be drawn off; thirdly, the Greatness and Vehemence of the Disease, so a Plenitude, a dangerous Pleurisy, and other great and acute and urging Diseases require a large Evacuation of Blood; but middling Disorders require a less Discharge: fourthly, the Strength of the Patient; and these in relation to Bleeding overcome in Intention all the other permitting and forbidding Circumstances, and they are so necessary to be observ'd by a Physician, that if he imprudently neglects the Consideration of these, the Patient may be destroy'd even by once Bleeding: Since, if the Patients are vigorous and robust,

robust, or if their Strengths are oppress'd, they require a large Quantity of Blood to be taken off, but if weak and dejected, very little or none at all: fifthly, the Age; so old People and Children scarce bear Bleeding, but young Folks, and they who are in the Flower of Age do easily bear it; mean while, if any Necessity requires, Bleeding may be made Use of, if the Strengths of the Patients are entire, and it be known, how to moderate and proportion it to the Constitution and Temperament: sixthly, the Sex; so Women do more easily bear it, than Men; but in this Place two Things are to be regarded, to wit, first, we must refrain from it, as much as possible, in Women with Child, and in Women that have lately had their menstrual Flux, and especially in Pregnants, the first Months of their Pregnancy, as also in their last: Secondly, If Bleeding be requir'd absolutely in Women with Child, a Vein must never be open'd in the Foot or *Saphæna* Vein, but in the Arm, or somewhere else, unless an absolute Necessity demand it. Mean while Bleeding is so safe in some pregnant Women, to wit, in Plenitudes, or such as are accusom'd to miscarry, that by this Means Miscarriages have very often been prevented by it, tho' familiar to them, so far is it from having the constant Effect of making Women miscarry, that it works according to the Circumstances of the Quantity, and other Considerations. Seventhly, The Manner of Life, so they who are high Livers, who eat

and drink luxuriously, who lead an unactive Life, and void of Cares, who exercise but moderately, must heap up a great deal of Blood, may be plentifully blooded : On the other Hand, they who live sparingly, who exercise much, and are loaden with Cares, must be sparing in drawing off Blood. Eighthly, The Habit of the Body, so a soft, lax, and fat Habit, liable to perspire much, because it is fill'd with phlegmatick Humours, ought to avoid it ; on the contrary, a fleshy, firm, and strong Body, in which the Veins swell and appear large, bear it with Ease. Ninthly, Custom, for they who have been accustom'd to any Discharge bear it much better than those who are seldom used to it. Tenthly, The Constitution of the Air and Country ; since these, the more temperate they are, and the more they recede from either Extreme of Cold or Heat, the more safely may Blood be drawn, and in a larger Quantity. Eleventhly, The Time of the Day, and of the Year ; as to the latter, no Choice can be made of it, unless in preventing Diseases which have usually attack'd Patients at certain Seasons ; and I think the Spring is the best Season for Bleeding, and the Fall is the next ; and in these annually periodical Diseases, Blood should be drawn a little before the Patient is attack'd ; so also in Women, in which the menstrual Flux is suppress'd, it is convenient to open a Vein three or four Days before the usual Time of that Flux ; if you attempt

attempt it sooner or later, you only torture them in vain. And as for the Time of the Day, the Morning is always the best, because the Vein closes before Night, and tossing in Bed does not endanger its opening again. But in acute Diseases, and such as have pressing Calls for it, any Time of the Day or Year will serve, for Necessity has no Law in these Cases ; as for the Time of the Disease, I have already spoke of it. How much Blood is to be taken away in any Disease, cannot be precisely determin'd by any Means ; The Strength of the Patient, the Force of the Disease, and other Circumstances, must limit it. In general, twelve Ounces is a middling Quantity for Men of Five and Twenty that are robust, and whose Disease is violent ; And altho' it be true, that so much Blood is to be taken away as the Disease requires, or till Relief be got, or the Intention is satisfied ; mean while I am of Opinion, that it is always safer to take away less than suffices, than more than the Patients can bear ; first, Because this Assistance is beyond all others in the Physicians own Hands, and it often happens that the Physician can't err twice ; and, moreover, a Physician ought to avoid all Handles of Calumny as much as in him lies ; And therefore as often as it is requir'd to draw Blood plentifully, if it can be done, I prefer those Discharges that are made gradually, and not all at once, and if Necessity require more Discharges, let the Patients and Standers-by see that you are unwilling

willing to exceed, yet resolv'd to overcome the Disease : for here, if any where, it is true, that Excess is an Enemy to Nature, and to discharge too much at once is dangerous ; and indeed it has not once happen'd that some, by reason of too rash and large Discharges, made too hastily, have fallen into Swoons, Bloody Fluxes, and many such grievous Evils ; yea, who have by Bleeding given up the Ghost under the Surgeon's Hands. I wonder therefore, that there should be any Physicians who should order Bleeding, till the Patients faint away, since these Things have had so bad Consequences ; by this Means throwing their Patients into Hazard of their Lives, when they might by Caution have done the Work they intended, and have run no Risques : There is one Thing I must add to all the other Cautions, that, altho' it be of small Moment, because some have had Advantage by it, and therefore it ought not to be neglected, or pass'd over in Silence, since there are not a few, who, as often as a Vein is to be open'd, or as soon as the Blood begins to flow, or at least before the Surgeon has rightly finish'd his Work, and has taken off a Quantity sufficient to answer his Purpose, they faint away, and fall into a Swoon ; wherefore to prevent this Inconvenience, such must take Notice, that they ought not to observe any other Posture, than such as will agree with them, and will prevent this Disorder, and lying down on Bed, being found the most effectual, they

they ought to lie down, when they are bled. That this may be confirm'd by some Example, I have known many who never are let Blood out of Bed, but they faint away, who, on the other hand, whenever let Blood in Bed, they not only don't faint, but bear a large Quantity to be taken away without the least Inconvenience, nay, and even do bear it to be repeated as Occasion requires, and are relieved by it: It can't however be affirm'd, that all will avoid fainting by this Posture, at least, they will bear it better in that Posture than any other, as all know. As for opening an Artery, I shall not spend much Time about a Discourse on it, because it is now so seldom advis'd, that few Authors do ever make mention of it: And, in truth, it is not to be attempted inconsiderately, or upon any slight Occasion, for, because the Blood, flowing and even spouting so impetuously out of open'd Arteries, is not readily stopp'd; nor, if it be wholly stopp'd, is the Wound easily brought to cicatrise; opening an Artery is, without doubt, hazardous, and not to be cut without an absolute Necessity, and without the Assistance of a skilful Surgeon. And altho' opening an Artery, for certain Reasons and upon certain Occasions, is but seldom to be attempted, and then to be done by skilful Hands; yet is it not quite to be abolish'd and neglected; for it has been so successful, that after all other Discharges, it has completed the Cure. Therefore, that this Operation may
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suffer no Discredit, and may answer the Ends of those who prescribe it, Regard must be had to four Things : First, Blood is never to be taken from a large Artery, but from some small Branch only ; for by this Means both the Force with which this arterial Blood flows forth, is more easily check'd, and, moreover, the Wound is more readily cur'd and heal'd up : Secondly, They are only to be open'd in lasting Diseases ; for Example, in a desperate Inflammation of the Eyes, Redness of the Face, a stubborn and continual Head-ach, a lasting Sciatick Pain, and some such obstinate Diseases, which don't usually yield to any other Remedy : Thirdly, Recourse must be had to it, when the whole Mass is extremely vitiated, and too acrimonious : Fourthly, They must then only be open'd, when opening a Vein has fail'd often ; which few Observations being rightly made, it may be done with more Safety, and greater Advantage to the Patient. There are indeed many other Ways of drawing Blood, for Example, by Leeches, by Scarifications, with or without Cupping, and the like ; but since my Design was only to shew where Bleeding could be useful or dangerous, I shall omit any further Notice of these as belonging to the Physician or Surgeon to direct ; and in the same Manner, and for the same Reason, shall I make no mention of that whimsical Invention of Infusion or Transfusion of Blood, since so few Experiments have been made, as yet, of this Affair, and it is to so
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little Purpose to say any thing of it to such as this *Directory* must be perus'd by : And now having said all I can think of concerning Bleeding, to such as these Sheets are intended for, and having couch'd my Directions in as few Words as I possibly could, to avoid Obscurity, for my Design is only to prevent Mischiefs, or do Good to my Countrymen ; since every Family is naturally led to try Bleeding on too many Occasions, and, on the other hand, some Families are utterly averse to it upon any Occasion ; I hope I have directed the former when to open a Vein, and have encourag'd the latter to make use of it as they ought, leaving Room enough for Physicians to determine upon the Quantity, the Time, the Manner, the Place, and many other Circumstances, which would be improper for these Sheets. *2.9 of 13*

There is another Discharge which Families very freely endeavour to promote, for the Relief of their Servants, and themselves also, to wit, *Sweats* ; few are ill, but they fancy a Sweat will do them good, and therefore a little Venice-Treacle, and warm Ale or Posset-drink is given at Bed-time, and they are cover'd close, and thus they lie in a Bath all Night ; but whether this be always done with Advantage, is the Question : I can affirm the contrary, by Experience ; and therefore when slight Disorders attack, I shall briefly direct where Sweating Medicines are proper or improper. Whenever the Blood is blown into a Fever, and there is a Tendency to Sweats, and

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the Patient is found to be relieved by them, we ought to encourage them, by giving volatile Spirits or Salts of Hartshorn, of Salt Armoniack, of Vipers, to promote this running off of the Humours by the Pores, and these ought to be given at proper Distances, and in proper Doses, as well as in proper Liquor; for Example, suppose you find any one in your Family ill of a Fever, and they incline toward Sweats, and you observe, that as they sweat, their Thirst abates, their Heads grow easier, and all their other Ailments they complain of abate in Proportion, let them take every third, fourth, or fifth Hour fifteen Drops of Spirit of Hartshorn, or a Grain of the volatile Salt of Hartshorn, in a Draught of Sack-Whey or Gruel, and let them keep close, and sweat on gently, till their Fever is gone off: Sweats are sovereign Remedies against Diseases arising from Serum and Phlegm, and I shall give Directions how, and what sort to make use of; for the same are not proper in all Constitutions; some, being good in one State, would prejudice a contrary one; so viscid, phlegmatick, gross Humours are not to be attack'd with Bole Armoniack, seal'd Earth, (call'd by Physicians, *Terra Sigillata*) and such like, which are fatty Earths, and are very astringent, and would increase these Disorders, but with Guaiacum or Sassafras, and the like, which have an inciding and attenuating Quality, and for this Reason may be call'd Specificks for this gross State of Blood: Where,

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on the other hand, the Humours are too thin and acrimonious, the aforefaid Earths are moſt convenient, becauſe they ſtop and check that rapid Motion of the Blood, which is communicated by the Salts of it, twinging the whole Syſtem of the Solids; if we promote the Circulation too much, all flies off in Perſpiration; and if, on the other hand, the Blood moves too ſlowly, this Perſpiration is check'd, if not intirely at a Stand; but if we keep the Blood moving on in a middle Tenor, Sweats enſue: It is therefore better to move gently on, than too haſtily; the ſtronger Sweating Medicines ought not to be given in the Beginning, unleſs ſome grievous Diſeaſe requires them; for we ought to try what fails, and give gently altering Drugs at firſt, to diſpoſe the Blood to part with its offensive Parts; for Example, in phlegmatick Caſes, where the Patients are cool and pale, we ought to thin the Blood, and when it is thus alter'd, very probably the ſame Remedies continued will raiſe Sweats, which at firſt did only contribute to make the Blood thinner; however, it muſt be granted, that there are Caſes which require Haſte, ſuch as the Plague, and even ſlow, as well as low malignant Fevers: yet it is not without Anguiſh, and a Loſs of Strength, that theſe Sweating Medicines are given, which, however, is recompens'd by the Prevention of the Blood's ſtanding ſtill, and by Cordials, and a thin, nourishing Diet; there are certain Pleuriſies, more eſpecially malignant ones, or baſtard ones,

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where the Pain only affects the Muscles, which will yield in two or three Days to a gentle Sweat; among Sweating Medicines, I prefer the fluid and moist ones, before the dry ones, first, because they are more readily sent and convey'd into the Blood, and, secondly, because they add Matter of Sweat to the Vessels, and serve as a Vehicle to the morbidick Matter that is so thrown off: hence may we see the Mistake of some Physicians, who, after they have given their Patients a Sweat, give their Commands that they shall have no Liquor or Drinkables given them; on the contrary, they should swallow a great deal of warm Liquors, that will dilute their Bloods, or great Anxieties and Anguish will attend the Sick; but if they drink plentifully, they begin to sweat with Ease and Pleasure; indeed the Medicine should first produce some Change, before we give the Patients Liquor, because as in Vomits and Purges we never give the Patients any thing to drink, till they begin to be squeamish, or their Guts begin to wamble; so in Sweating, they should not drink till the Medicine begins to make them dry, for otherwise, there is Reason to fear, we shall drown the Medicine; in truth, if they don't drink plentifully whilst they sweat, the Blood, unless it be very thin and watery indeed, will grow thick and gross, and Heat and Burning will ensue, in the stead of Sweats, as we see in holding Serum over a Candle, the watery Parts fly off, and leave the gross Parts behind:

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I have said less of Sweats, than they who live in moist Countries would have done ; but as they are Edge-Tools, I leave them to my Brethren to manage, being unfit for common Use in Families, for whom this is design'd.

Physick is another Traffick that Families deal much in ; they find themselves or their Children out of Order, they fancy a Dose of Physick will do them Good, and accordingly command their Apothecary to make them up a Dose ; all the Grounds they move upon, is their Fancy and Inclination to take Physick ; now that this Fancy may be guided by Reason, I shall give them some few useful Rules, first premising, by way of Preface, the Nature of Purges, in as easy and intelligible Terms as I can. The Word *Nature*, consider'd as it is in itself, is beautified with various Definitions and Descriptions, as if it were the sole Governess and Directress of all human Actions ; by it Physicians mean nothing more than a *Quantity of Spirits moved for the Conservation of Life*, abstracting from any other Consideration, whether of the Soul or the Divinity, as the first Movers ; and this is a sufficient Inquiry for the Physicians, and thoroughly answers all their Ends and Purposes ; these animal Spirits are consider'd either with regard to their Subtilty, to their Offices, or to the Parts in which they are lodged ; we imagine their Figure to be globular, because this is a Figure that coheres the least, and because it is the fittest also for Motion ; their Motion and

Quantity are not easily assignable, but we may say in general Terms, that they move the more swiftly, where the Heart is more impetuously moved, and that they move the quicker, where they find the fewest Obstacles to Motion: The Effects depending upon their Motion are many, namely, by them we see, hear, taste, smell, and feel, by them our Chyle and Blood are labour'd and made, by their Assistance the Secretions are made to depart from the Blood, and by them all our natural Functions perform their Offices; so long, forsooth, as they are neither defective, nor do they exceed in Quantity, so long are all the aforesaid Things done in a proper Manner; but if, on the other hand, they exceed or become deficient, then do we hear of Diseases, as you may see very readily in all Physical Authors: This being premised, and *Nature* being explain'd after this Manner, it remains that I descend to satisfy you concerning the Operation of Physick; under which Title, I also include Vomits: As to Purging Medicines, to which I chiefly confine myself, their Essence consists in some acrimonious Salt contain'd or wrapt up in some viscid and gross Parts, contemning the Opinion of those, who suppose that Purges have a specifick Power to discharge Humours from some certain Bowels, and from no other; for Example, that Rheubarb discharges Choler from the Liver, that Aloes discharges only from the Stomach or Guts, that the Brain, and all the System of
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the Nerves are emptied by Hermodactyles, or that the Breast and Lungs require Agarick only, to evacuate Humours from them; of which specifical Discharges the Antients neither have given, nor could give any other Reason, besides Conjectures and Signatures: The Manner in which the Spirits act upon the Contents of the Stomach and Intestines, as it is uniform consider'd in itself, both as to our Aliments, Medicines, and Poisons, yet it varies according to these, when they are taken, as appears from the Effects ordinarily ensuing; of which these are such as attend the taking of Physick, a Loathing, a Shivering, a slight Giddiness and Drowsiness, an universal Weariness, Gripes, in the small Guts especially, Purging, and after it a Costiveness, and such like; all which do arise from the Irritation of the Solids, and a Dissolution of what we have formerly swallow'd. I should refer the Loathing to a Solution of the Salts of the Purge only, that stimulate the upper Orifice of the Stomach, unless there were some other concurring Circumstance, that seems to be prior to this Cause; for as soon as the Physick is dissolv'd in the Stomach into its integral Parts, these minute Bodies commence a Struggle somewhat lower than the Stomach, because they are not thoroughly dissolv'd till they come thither, and by such a Solution being made, these Particles, by expanding themselves, and bearing against the Walls of the Guts, do rudely twitch them, and hasten their peristal-

tick Motion, and so bring on a Purging; in some Stomachs indeed, the Physick is more hastily dissolv'd, and then it has the *aforesaid* Effects on the lower Orifice of the Stomach, and occasions a Vomiting: This is the Reason then of Vomiting, or of Purging, to wit, if the Physick does not find a proper Menstruum in the Stomach to dissolve or disunite its Salts, and is therefore carried out of the Stomach into the Guts undissolv'd, and mixes with the Choler and pancreatick Juices, and is dissolv'd at last by them, then Purging only ensues; but if it dissolves any where near the Pylorus or lower Orifice, it necessarily causes either a Vomiting, or at least a Loathing, according to the Degree of its Solution, and consequently of its Stimulation; nay, if it never does dissolve at all, neither Vomiting, Loathing, nor Purging will follow; wherefore the more these Salts approach to Nature, the less will they purge, and the more Salts are dissolv'd, the more will Physick work. The Physick, if violent, hardly has Time to enter into the Blood, for it presses its way downwards; but however, these strong ones have very ill Effects, by draining the Humours out of the Body, they exhaust the Juices and Spirits, and bring on Convulsions, and Faintings, nay even Death itself: Elective Purges are rejected by all sound Reasoners, and 'tis a pity that my ingenious Friend *Dr. Keill* should have slipt into so palpable an Error; the Physick being dissolv'd, and being made capable of fretting the
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245

the Glands of the Guts in a greater or less Degree, all Humours must take their Chance, the various Humours offering themselves at their Orifices are milk'd out, as long as the Physick continues to stimulate; if this Stimulation is vehement, a great deal is carried off, which, according to the Haste made in exerting its Force, draws Humours more or less tinged; the Purgatives have acquired various Names, some being famed for carrying off Choler, others Phlegm, others Melancholy, and others Water; this Sympathy therefore, or Antipathy of the Antients, is a ridiculous Attraction or Repulsion, of which no Reason can be assigned; all those Distempers therefore which have been cured by Physick, and have been said to depend on such Sympathies and Antipathies, are accounted for by Dreams; to say therefore that stubborn Fevers, violent Head-aches, Fluxes, Madnesses, Melancholies, stubborn Hypochondriack Diseases, and such like, have yielded to specifick Purges, is or ought to be exploded; for certainly no Disease yields to Physick, that does not depend on an Excess of Humours, or too violent an Influx of them into some Parts, both which are provided against by proper Catharticks, by which I mean such Purges as will discharge a sufficient Quantity. We are to observe, that some purging Medicines do exert their Force sooner than others, because the resinous ones are very fix'd, and are long in dissolving, and they have one Property,

to wit, they gripe the most of any Purges, and all Vegetable Purges, in Proportion as they are resinous, or, which is much the same, as they are viscous, do also gripe; for which Reason, we always prescribe along with these Purges some volatile Oils, as Oil of Cloves, Oil of Nutmegs, Oil of Cinnamon, and the like, because these attenuate the Viscosity, and hinder it from sticking to the Guts, which it otherwise does not fail to do; these Resins also are made to work more violently by giving Broths, Water-gruel, or Sack-whey after them, and to gripe us sorely; again, if we mix any fix'd or volatile Salt with these Resins, they hinder their Operation, nay, and even quite abolish their working; if we give heed to these three Circumstances, we may reason tolerably well upon the Effects of Resinous Purges; fix'd Salts destroy the acid Parts of the Resin, and then the Resins don't ferment, nor therefore work; the watery Liquors congeal the Resin, which was before dissolv'd, and make it stick close to the Guts and gripe us; the Oils attenuate the Resin, and make it glib, so that they don't stick to our Guts nor gripe: Now as to the giving Purges, we must consider, that before we give any strong Purge, such as Scammony, Colloquintida, and others of the like kind, we ought carefully to examine whether *Nature* can bear such rude Shocks as they usually give it; whether the Particles of Matter in the Bowels be of a like Nature, or of a contrary one to the Purge, and whether our
Blood

Blood abound with Serum enough; these being rightly consider'd, and branch'd out into Particulars, will direct us in the Giving and Choice of Physick; for Example, *Nature* is said to be strong, when the Patients have much Blood and Spirits, and when they act with Vigour and Strength in all their Exercises; but, on the other hand, she is said to be weak, when they ha'n't Power to stir, and when they betray an Inability of all kinds; then indeed we must act with Caution: in the first Case, Physick of any kind may be given freely, but not so in the latter: as to the Nature of the Matter offending, it were not easy in this place to assign in particular how it may be discover'd, and therefore I shall only give a general Hint, to know what sort of Physick to pitch upon: When you find a Person of a warm or hot Constitution, that is, who has a great Heat in the Palms of his Hands, and Soles of his Feet, who is perpetually craving Liquor to quench his Thirst, who is, upon this account, always costive, and who makes a high-colour'd Water; to such, the gentler and coolest Physick must be given, because it is more than probable, that if you give hot and strong Purges to such a Person, it will either not work at all, or make them so thirsty and uneasy, that they will fall into some Inflammation of the Bowels, or into a Fever; for that Constitution which approaches to a Fever already, does not want much to blow up a real one; in the same manner, we see

that they who drink strenuously of Brandy, or even of strong Wines, seldom fail to bring fatal Fevers upon themselves, and strong Physick works no otherwise upon the Blood than strong Liquors: but if a Person have cool Hands and Feet, and is of a cool Temper all over, and makes pale Water, and is of a pale Complexion, there is no great Hazard of such an one falling into Fevers; you may venture to give them warm and strong Physick; for, generally speaking, such a Person's Blood moves on sluggishly, and their Solids are not easily stimulated, so that there seems to be a natural Call for strong Physick: In ferous and watery Constitutions, where they have also little Heat upon them, nor any Thirst, the strongest Physick is required, because their Solids are so soak'd, as I may say, in Water, that they are flabby, and almost insensible of any Shock given to them, so that very sharp and pungent Drugs will have but a moderate Effect upon their Guts, their Fibres are, as it were, asleep, and want to be awaked with strong Twitches and Shugs: The most of Families keep Sena, Rheubarb, Manna, Cream of Tartar, or Epsom Salt in their Houses, and some of them also Tinctura Sacra, Pil. Ruffi, and Pil. Cochiae; and to say the Truth, these are sufficient for the Purposes of a Family, because the former answer all the Ends of cool Purges, and the latter three are of a warmer Nature; when therefore it may be guess'd, by full feeding, that Servants or others have

have their Bowels stuff'd with slimy Humours, and are of a moderate Constitution, the *Tinctura Sacra* is an excellent Physick; you may give to a full-grown Person three Spoonfuls at Bed-time, and three next Morning, and it will carry off any Winds and Slime in the Guts, without griping them; it helps to carry off all Indigestions, and makes the Person that takes it lightfom next Day: the *Pil. Ruffi* may serve for the same purposes, but then they are best taken in a Morning, to twenty Grains or half a Dram, made up into four or six Pills, and keeping warm, and drinking Broth, let them work off: the *Pil. Cochiae* are somewhat churlish, and they work with some Precipitancy, they are good in Colicks, and in pale Complexions, they carry off all watery Swellings in the Legs, or any where; but I don't much advise a constant Use of them, unless some urging and pressing Occasion calls for them, neither should they be given without observing an exact and strict Regimen; the Person who takes them, should not peep out that Day at all; they should not be taken in Summer, because they cause such Thirst, and they leave the Takers languid and weak; hysterical or hypochondriacal People must not venture upon them at all, for they work so tightly, that they exhaust their Spirits, which in those Persons is an easy matter, insomuch that I have known them complain of this Symptom, even before they begun to work at all. The Sena, Rheubarb,

barb, Manna, Cream of Tartar, *Glauber's* Salt, and *Epsom* Salt are commonly known, and may be taken more freely, because they seldom disturb the Blood much, but produce their Effects mostly in the Bowels themselves; they are convenient in Costiveness, in Bellies swell'd with hot Winds, that is, with Winds that betray themselves by Belches of a stinking Nature, and if these Winds bring up a nasty, fatty, stinking Matter, it is then convenient to wash the Stomach with warm Water, or to take a little of the *Indian* Root in Powder, which will carry them off; and let this suffice.

Having dispatch'd what I judg'd necessary for directing Families in their Diet and other Things, either commonly occurring, or much in Use in their Houses, it is highly convenient to give them also full and particular Directions in their Sickness, that when any of their Servants or Selves are out of Order, and labour under Diseases, they may know how to regulate the Sick, in Relation to their Diet, and all that belongs to Kitchen-Physick: Without this Diligence the Work would be imperfect, and it is certain that many are cur'd of Diseases by the Strength of Nature, only assisted with Kitchen-Physick; nay, and it is certain also that Physick, unassisted by a Regulation of this Kind, never avails, because the Patients offend as much by an ill Regimen, as they profit by taking Drugs regularly, and so it happens that they amend slowly, or not at all,
whilst

for HEALTH. 251

whilst their Physicians are at a Stand to know why they don't advance according to Expectation ; wherefore I shall begin with a Disease common to Children ; that is, I shall speak first of *Worms*.

I shall, before I descend to give Directions, say somewhat of their Origin ; by this we will be more able to shew how to avoid them ; The Antients knew no other Cause of Insects than Putrefaction ; and so maintain'd an equivocal Generation, and till of late no other was dreamt of, as may be seen in their Writings : But as their Opinion has neither Reason nor Experience to support it, I shall shew you the modern Opinion concerning their Rise. I must confess it is past my Comprehension how Bodies so Geometrically fram'd, as the least Insect is, that it may even vie with the largest Animal, if not surpass it, in its admirable Structure, should be thought to take its Rise spontaneously from a Dunghil. Wherefore our admirable *Harvey*, the first Light of this last Age, undertook to prove, that all Animals were generated from an Egg ; *We*, says he, affirm, that all Animals whatever are bred from an Egg, and their first Conceptions are Eggs : And this Opinion *Redi* being fond of, and willing to confirm, he took Flesh of all Sorts, which he had observ'd to breed Worms, which he put into Vessels, and defended it from the Air, that no Flies could come at it, where he kept it for some Time, and he found, that altho' the Flesh smelt strong, there were

were no Worms : He cover'd more Flesh with a thin Cover, but the Flesh in the Vessel was free from Worms, altho' the Cover was full of Flies Eggs : He try'd the same on Milk, Vinegar, Honey, and the like, and found that it was a hatching of Eggs, that made them full of Worms ; and as some Nuts have thin Shells, and the Egg laid on its Shell hatches and enters, so do we see Worms in Nuts, Galls, Pease, and the like ; so that all Animals are originally from an Egg ; and that Opinion which supposes all Mankind to have been contain'd in the *Ovarium* of our first Parent *Eve*, seems to me the most probable, and much more than the other, supposing the *Animalcula* to be in the *Semen Virile* : These being what was judg'd proper to premise, I think it clearly appears, that Worms have no other Origin than an Egg, including the Rudiments of more Animals to come : Moreover, Children who suck their Mothers Milk, are seldom or never troubled with Worms ; but such as eat other Victuals, are very subject to them, which is a Sign that no Worms have been hatch'd in the former : However, it is also possible that they may enter into the Mother's Milk ; for if we consider the Size of the Egg of a Worm, which, according to *Lewenhoeck*, does not exceed the Millionth Part of a Grain of Sand ; or, according to others, is near Three-thousand times less in the Egg than when hatch'd ; or, as others say, is in the Egg, to what it is when grown, near Five-hundred

for HEALTH. 253

hundred and Sixty-thousand Times less ; it may easily be conceiv'd that such a small Bulk will be buoy'd up in the Air, and may be convey'd into the Lungs, or along with the Spittle, into the Stomach, and mix along with our Victuals, and be hatch'd in the Childrens Stomach from the Mother's Milk, in which they swim. These Eggs being very small, may escape the Grinding of the Teeth, and pass whole into the Stomach, and may also pass undissolv'd or unbroke from the Stomach, more especially where the Digestion is weakly perform'd ; for if that be vigorous, their Texture and Case will be tore asunder ; if weak, it passes down from the Stomach to the Bowels, and the Time of its hatching being undeterminable, it is carried along with the Chyle, the Mother's Milk, and into the Child's Stomach, where it is hatch'd and does harm ; so much we know, that Warmth and Moisture are proper Conditions for this Work, and that being evident enough in the Stomachs of Children, they are brought to Life by it. We are sure that Heat has an Effect on Hatching, as is evident in *Silesia*, and in *Grand Cairo*, if it be too weak an *Oven*, or if the Fire be too strong, the Work does not succeed. As to Flies, all the World knows that all sweet Nourishment is the remote Cause of their Production ; they delight in Sugar, and do often lay their Fly-Blows there : It is not easy to determine what Species of Worms they are that are hatch'd within us ; however, they

they seem in the main like common Earth-Worms ; but indeed those bred within us are not all of a Kind, the further Inquiry into which curious Particulars I leave to those who have more Leisure than I pretend to have. I shall in this Place only take Notice of such Causes as give Rise to their being hatch'd, which we must seek among the six Non-Naturals : A warm and moist Air, therefore, is a great Promoter of this Work ; they float in the Air when they are in their Case, and communicate themselves to Water, which is expos'd to the Air, and are even hatch'd there, and Mankind often swallows them thus residing in Liquor, as they will see, who will take the Pains to make use of a Microscope ; and hence are a warm and moist Spring and Autumn apt to breed Worms : There are certain Nourishments which we feed much upon, and such are all Sorts of Fruits, and especially Plumbs, Sugar also, Honies, Flesh-meats, especially the wild Sort ; as also Drinkables, such as Water, and Beer of the sweeter Kind ; all these they are delighted with as well as we are, and these hatch them with Ease, and as we feed upon such Diet, no wonder they should pass into our Bodies ; And as nothing contributes more to the breeding of Worms, than stagnating Fluids, nay to any Sperm of Fishes themselves, so an unactive Life, and Sleep, which help our Blood to stand still, have a great Share in breeding them : And in Truth those Passions of the Mind, which stop
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the Career of the Circulation, such as Grief and Frights, do also contribute to hatch these Creatures ; and in like Manner a slow Motion of the Blood, introduc'd by a phlegmatick State of Humours, and such Medicines as do check the Circulation, do all add their Mite towards hatching these Creatures in us. There are observ'd in us three or four Kinds, the *Round*, the *Long*, the *Small*, and the *Broad* ; The *Round* and the *Long* are commonly found in the small Guts, and they are generally of a white Colour, as is the Chyle on which they feed ; and these are generally found in the Guts of such as are of a Cholerick Constitution. The *Small* ones, like unto the Mites in Cheese and Meat, these generally lodge in the larger Guts, and more especially in the Last, near the Fundament, and are very often found there in great Clusters. The *Broad* ones lodge in the middle Parts of the Guts ; they are not so much found in us as the others, and are seldom or ever found in Children ; they have large Mouths, and if you blow them up with a small Tube, they swell to a great Size, but have no Knottiness like the others ; they are apt to eat thro' the Bowels, and are dangerous. There is another Sort also, which is of a great Length, but they appear to be only a Chain of Worms tack'd together, as Dr. *Le Clerc* and Dr. *Tyson* have inform'd us : We see then that we must forbear all Sorts of Fruits, and Milk-Meats, unless they be boil'd, for Worms are so tender, that

that the least Excess of Heat destroys them; and boiling Milk kills all Worms in it; and the same holds good in Sugars, and other sweet Things, which are dangerous for breeding Worms, yet if you boil them in the Victuals, the Worms are readily destroy'd: Make use of Exercise, make use of the Juice of Oranges and Lemons, let their Liquor be hopp'd Beer, small Wine, or Wine in which Wormwood is infus'd; in the more advanc'd, put a little Quantity of *Mercurius Dulcis* now-and-then upon their Bread and Butter; let them now-and-then also take a little Rheubarb, especially when they have committed any Mistake in Diet, because this will carry off all the little Eggs that may have been lodg'd within them, from the Food they have liv'd upon: we must endeavour to make the Blood circulate freely, for two Reasons, because the Blood never moves briskly, but it breaks the Worms afunder; and because the Blood never moves briskly, but it causes Heat in the Body, which also kills them: However, if they rage much, and occasion much Pain at the Stomach, appease them for a while with some sweet Thing.

Dropfy The next Disease I shall consider shall be a *Dropfy*; which I shall first take a View of in general, how, namely, the six Non-naturals contribute towards it, that we may know to avoid any Additions made to it; as to which Causes, I say all that is worthy of Consideration, which can variously disturb the Particles of the Blood, and suppress the Motion of its active

active Parts, and therefore all viscid and earthy Things, which can weaken the Concoction or Digestion of the Stomach, are mainly to be weigh'd; because they occasion a crude Chyle to be communicated to the Blood, which being less exalted than it ought, is rendered unfit to be duly volatiliz'd, and therefore it makes the Blood gross, and slow in its Motion: Hence do we see People subject to ill Habits and to Leanness, for the most part, become most dropfical, because the volatile Parts of their Juices are either not supply'd, or have so flown off, that there is no true Chyle, nor any true Blood, and consequently a Foundation is laid for Dropsies to ensue; which I shall now further take into Consideration: The Causes then that in particular introduce Dropsies are, first, the *Air*; which, if cold, cloudy, and hazy, that is, mix'd with gross Particles, is an Enemy to a Dropsy, inasmuch as it thickens the Lymph of the Blood, and renders it unfit for Motion; in like manner they who expose themselves to catch cold often in their Bellies and Feet are subject to Dropsies, or if the Air be stuff'd with acid Particles, it also is found to have this Effect upon Human Bodies; hence is it that they who inhabit the Northern Climes are very liable to be dropfical: the Reason of all which Appearances I take to be, that all such Air checks Perspiration, encreases the watry Part of the Blood, or congeals the Juices, and hinders the Rarefaction, retards therefore the

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Work of Concoction, and if the Blood be made sharp by such Air, then is there Danger that the Blood will not only be gross, but also corrosive, and then where it is obstructed, it corrodes the Vessels, and makes them spue out their Contents into some Cavity, and so is produc'd an *Ascites*, or a true Dropfy, either of the Breast, Head, or Belly. As for the Meat and Drink, if they be gross and viscous, so that they can't be divided in the Stomach, they will necessarily breed a viscous Chyle; Liquor that is taken, if it be small, and more-especially if it be swallow'd cold, whilst you are hot, is apt to hurry on a Dropfy, inasmuch as it thickens the Blood and Lymph, and stops the Circulation suddenly; but even Liquor so hot as Brandy Spirits are, is a Breeder of Dropfies, especially in a Morning, because it weakens the Stomach, and spoils the Digestion; it weakens the Stomach by taking off its mucous Coat, and the Victuals are hasten'd out of it, because, being bare, the Stomach is convuls'd upon any Load it contains, and it never gives Time for Digestion; besides, it washes away or weakens the saltish Ferment of the Stomach; so that in all Appearance we are forty Times more in Danger of a Dropfy from our Diet than the Air, for it is evident, that the Victuals and Liquors which are watry, viscous, glutinous, sour, cold, and which have few Spirits in them, and such poor People live upon, do produce a gross and thick Blood, that is apt to stick in the Vessels, and to cause an Extrava-

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sation of its thinner Parts ; so that too much Temperance and too gross Victuals are two Fountains of a Dropsy, to wit, eating gross Meats and Abstinence from necessary Fluids : But as these gross Victuals do cause one, so does a moderate Use of warming Diet, in Meats and Drinks keep us from one ; wherefore I observe those who eat and drink of spic'd Ragoos and of strong Wine, nay, even of Brandy, in a moderate Quantity, are not subject to Dropsies ; but, on the contrary, whoever indulges in a pompous and delicious Table, and eats and drinks immoderately, can hardly fail of falling into one, because they utterly destroy the Blood's Texture, and this is more especially true in Brandy, which corrodes even the Fibres themselves, these Meats and Drinks continued for a long Series of Time, exhale great Part of the most fluid Particles, and leave the Blood dry and glewy, so that it sticks in the small Vessels, and, according to the Number of Parts it sticks at, either causes a particular or an universal Dropsy : This is not the only Means by which these Delicacies raise Dropsies, for they are apt to produce Fevers, which do also terminate in Dropsies ; or by being glutted down in an exorbitant Manner, the Chyle cannot be thoroughly digested, and the Blood is corrupted by this bad Nourishment ; or, suppose our Stomachs do digest the immoderate Meals we make, yet the vessels are crowded with an Excess of good blood, which cannot be regularly dispens'd,

and therefore stands still, and runs out of the Vessels; also those Nourishments which are apt to turn sower or caustick, and so corrode the Blood and Fibres do contribute highly towards the same End; such are all mineral Salts, all adulterated Wines, all salt Meats, and all that will pass off suddenly by Urine. *Sleep*, if it be immoderate, is a Caufer of Dropsies, because by it, the Humours, being more at Rest, stand still, but more-especially if they sleep in the cold and open Air, because from such a Cause the whole Habit of the Body is in Danger of being obstructed, and the Blood is rendred gross and thick; and yet if People watch too much, their Blood grows also thick by too much Perspiration; so that Excess is always dangerous. Too great Exercise of the Body will have the same Effect as too idle and sedentary a Life has, to wit, by the latter the Blood grows gross for want of Motion, and by Exercising too much it also grows gross by an Evaporation of the most fluid Parts. The Secretions, perhaps, have a larger Share in producing Dropsies than any other of the six Non-naturals or evident Causes; from their Irregularities we hear of Stoppages of the menstrual Flux, of the Hæmorrhoides, of the Child-bed Purgations, and of many other Suppressions of Blood; all which, although they may arise from one and the same Cause, namely, from Obstructions: yet a Rupture of the Lymphaticks may be produc'd from these Hæmorrhages lessen'd or stopp'd

stopp'd, inasmuch as the Mass of Blood daily encreases by them ; hitherto also may be re-ferr'd an Obstruction of the Pores in the Abdomen ; Hæmorrhages being suppress'd don't only promote Breaches of the Lymphaticks, but an Excess of Bleeding has often the same Effect, because it exhausts the Blood and Spirits, and for want of a due Circulation the Humours grow gross or watry ; what is said of Bleeding excessively from any Part, holds also true, in taking too much from the Arm, which is vulgarly known to have this Consequence ; moreover, Purgations, if too long continued, have, as I have often seen, produc'd the same Disease ; wherefore, as Experience shews us, that Dropsies happen frequently from Suppressions of proper and usual Discharges, I must add, that none of those do so certainly introduce them, as the Stoppage of the menstrual Flux, and the Hæmorrhoidal one : Many also do suffer from the Passions of Grief and Sorrow, for they naturally bring on a sedentary Life, and both together arrest the proper circular Motion, the Blood runs slowly, and has Leisure to unite and grow viscid ; but there is somewhat more in Grief than a common Cause, for Grief dries and shortens the Nerves, and they being annex'd to Arteries, and surrounding them, the Blood cannot go forward, and so stops : this is the principal Reason why so many Hysterical People are so subject to Dropsies in their Abdomens, for the Nerves of the Mesentery, and elsewhere, are so often

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262 *The Family Companion*

contracted and convuls'd, that they stop the Circulation for a Time, nay, and at last these same Nerves are under a perpetual Convulsion, and then it is impossible for the Blood to pass through half the Vessels it ought, wherefore the Remainder will swell, and will often spue out its thinner Contents into the Cavity ; both which Accidents I have seen upon Dissections ; the first is the most common, because I have seen Women dye of Hystericks, and have open'd them, and have seen all the Arteries and *Vena Porta* much stretch'd with Blood, and nearly inflamed, which seems to have taken its Rise from so many, and repeated Contractions of the Nerves, that surrounded these Arteries ; and granting this, I think it is easy to account for the Rupture of Vessels too much distended, and consequently for Dropsies ensuing from thence : Things having this Face, how necessary is it for Patients to have a strict Eye to the evident Causes of Dropsies ; let them therefore chuse a serene and warm Air to pass their Lives in ; let them avoid all hard, stringy, gross, viscous Diet ; let them never touch Meats that are harden'd and shrivell'd with Salt ; smoak'd Diet is also dangerous ; let them live upon Meats that afford a thin, and yet nourishing Juice ; let their Victuals be dress'd with Spices and Aromatics, with Roots, Herbs, and Seeds of the warmer and attenuating kind, in a moderate manner ; let their Victuals be of young and tender Meats, of Fowls ; their Beer should be hopp'd,

hopp'd, or should have Steel infus'd in it, or be impregnated with bitter warm Drugs, as Wormwood, Gentian, Centaury, and Mustard Seed; they should avoid all fowre and harsh Things; let them go soon to Bed, and rise early; let them exercise moderately; their Discharges of Stool, Sweat, and Urine should rather exceed; let them be chearful and easy, if they have a Mind to avoid a Dropfy: They who are actually seiz'd with a Dropfy, should avoid Drinkables of any kind, as much as possible, and what they do drink, it should be taken warm: And, in order to deceive their Thirst, which is generally insatiable, they should hold a little Saltpetre in their Mouths continually.

Spittings of Blood do require a strict Management, and so far as relates to a housely Care, without which Physicians can never recover their Patients, I shall briefly set down: The Air is often an Occasion of this Disease, inasmuch as it inflames the Blood and Spirits by its fiery Nature, and renders it also too acrimonious; from such a Disposition of the Blood, it is possible, the Vessels may give Way both by the Juices taking up more Room, and corroding these Vessels; or, inasmuch as it is too cold, it may contract the Vessels into a narrower Compass, and make them too strait to hold their Contents, and thus also have we seen Spittings of Blood happen: For Cold affects the Lungs immediately, and so did *Hippocrates* affirm, that Cold as wan Enemy

to the Breast, and rais'd Coughs and Spittings of Blood. The next Thing that is to be consider'd in Spittings of Blood, is our Diet; when, forsooth, we feed with a plentiful Hand, when the Meats we eat and the Liquors we drink are too nourishing, where Patients are apt to grow plump, and when they lead a sedentary Life, and are free from Cares, a Plenitude or full Habit will be contracted, and will greatly contribute towards this Disease; or if they live upon a gross Diet, the Blood sticks to the Vessels, and causes a Stop in the Circulation, and a Breach of the Vessels; Liquors too spirituous, made Use of plentifully, do introduce a Spitting of Blood very frequently, because they over-heat and rarefy the Blood and Juices, and this State distends the Vessels even to a Breach of them. The *Bath* Waters are apt to occasion or increase such a Breach of the Vessels, as the learned Dr. *Willis* has observ'd. The Retention of the menstrual Flux, or of the Bleeding Piles, do often contribute to produce this Disease, because where there is either a Plenitude contracted, or there is any Stagnation of Blood in the Lungs, a Road is pav'd for such a Distemper. Violent Exercises bear a great Sway in causing Spittings of Blood, so far as the Blood rushing, by its too great Agitation, against the Walls of the Vessels of the Lungs, they are distended and broken: Into the Rank of such a Cause I reckon a Straining to vomit, to go to Stool, Labour, Running, Fighting, violent Sneez-

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ing, a strong Inspiration, Shouting aloud, Fencing too hard and long together, carrying of great Loads, or lifting them up, holding one's Breath too long, too great Straining in Coition, Dancing too much and too long, excessive Laughter; hence Wrestlers, Racers, Hunters, Singers, Trumpeters, Dancers, Porters, and such like, are subject to Spittings of Blood. Amongst all the Passions of the Mind, Anger is the chief Cause of this Distemper, for it promotes the hasty Motion of the Blood and Spirits, and tosses them in a violent Manner, so that it can be no great Wonder, if the Blood is hurried on in so irregular a Manner, there should ensue a Breach; for what Vessels can bear such a Shock? and it has been known, that Women under a violent Passion, whilst they have had their menstrual Flux upon them, have instantly fallen into a Spitting of Blood: There are also Chances that occasion this Disease, such are, a Bruise on the Breast, a Fall, a Strok, a Wound, Fevers of all kinds, that break a Vessel by raising an extraordinary Commotion, an excessive Distension, and a Spitting; moreover, a Difficulty of Respiration, such as happens to hysterick People; Sneezing and Coughing do occasion it; for wherever there is any great Impediment to the Motion of the Blood, or too excessive a Motion of the Fluids, Blood does readily flow from thence. These Causes producing this Distemper are the Result of Experience, wherefore the preservatory Cure must provide
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against two Evils, to wit, lest a Spitting of Blood should return, and lest an Ulcer should be bred from this Spitting: Both these Inconveniencies are prevented, if the Patients follow an exact Regimen of Diet, and the Blood be kept from abounding, and in a due Temper: Fasting, refraining from Excess in Meats and Drinks of a moving Nature, and Water-drinking, as also taking away Blood, and avoiding all the Causes I just come from mentioning, will effectually contribute to prevent Relapses into this Distemper: As for the other Part of Prevention, taken from Physick, I must leave to the Faculty.

Bleeding at the Nose, so far as belongs to our present Scope, I shall consider what evident Causes produce it, that Patients may avoid them; and, first, the Air is the Cause sometimes of this Distemper, as it is the most common Occasion of others; no one can live without the Air, and yet so many Inconveniencies in Life accompany its Changes, that it often destroys us; this is the assisting Cause of the intestine and progressive Motion of the Blood, its Particles enter our Lungs, and Pores of our Bodies, and, as in Summer, it is loaden with fiery Particles from the Sun, that are reflected, and therefore toss'd back upon the Surface of our Body with Force, and are mix'd with our Blood, particularly by the Mouth and Pores, and that add Motion to the Blood, which is universal; those Vessels that are highly distended with the rarefied Blood, and are the weakest,

weakest, are in Danger of cracking. As to our Diet, namely, Eatables and Drinkables, all the World is appriz'd of their Effects on Human Bodies: they who feed upon high Spices and Meats strongly salted, and who drink generous Liquors and acrimonious Things in great Plenty, against all Advice, and beyond Measure, deserve justly to suffer severely for such a Crime; and it has been observ'd, that Persons, who have liv'd high, and who drink Brandy Spirits, against their Physicians Advice, have fallen into this Distemper, and have been cur'd; but by following their old Course of Life, contrary to an Interdiction justly grounded, they have so relaps'd, as to be carry'd off by it. These Instances are too frequent to be called in Question; and all spirituous, aromatick, or volatile Things, taken too copiously, when they come into the Blood, do rarefy it, and drive it rapidly on; and as any Body put in Motion continues in that State, 'till it is impeded by some other Agent, it is not to be wondred, that the Blood should be so rapidly moved after the Use of spirituous Diet, as may be guess'd by the Frequency of the Pulse, since the whole System of the Vessels must necessarily be stimulated upon such acrimonious Food, and make all Resistance fall before it. If we exceed in *Exercise*, this same Distemper may arise from the Force impress'd on the Vessels, for by it the Blood and Humours are agitated more than usual, and are driven faster round
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the Body. Watching being a sort of Exercise, adds its Mite towards this Bleeding also. As for the Secretions, nothing is more common, than for this Disorder to arise from a Suppression of the Womens Monthly Flux, as it has been observ'd to do from the suppress'd Piles ; and surely, if those Things are retain'd within us, that ought to be cast forth, they find out some other Flood-gate, and run thither with Violence. As to the Passions of the Mind, they have a known Influence over the Motion of the Blood and Spirits ; more especially, if we suffer ourselves to be hurry'd away with Anger, towards those that have attempted to thwart us in our Affairs, and if we continue it, and indulge ourselves in Revenge, this Passion puts all in Motion and Fire, it gives us no Respite, and we always feel the ill Effects of it ; for an irregular and impetuous Motion of the Blood endangers a Breach of the Vessels, and as Anger has its Scene in the Brain, it acts upon it and all the adjacent Parts, and contributes to break the Vessels there, as several Examples have testified in Apoplexies, from Blood spilt on the Brain, both which arose from a violent Passion ; and have we not seen the bad Effects of this Passion on Children sucking passionate Women ? There are certain Drugs that are very moving and forcing, which being given internally, do raise Bleedings, such are Forcers of the menstrual Flux, such are warm *Bath* Water, and many too volatile and attenuating Remedies,
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administred with too plentiful a Hand ; some, who were never subject to a Bleeding at the Nose before, have fallen into it by taking, in a short Space of Time, volatile Spirits, to an excessive Quantity ; others I have known, who, by Venery too strenuously attempted, have fallen into a very great Bleeding : Some again have fallen into it from Strokes, Falls, Shoutings, Sneezing, and all such Things as are capable of exciting too brisk a Motion in our Fluids ; wherefore, in order to escape this Distemper, where Patients are subject to it ; they must avoid the scorching Heats of the Air, they must forbear any excessive Exercise, they must refrain from Spices, Spirits, Wine, and salt Meats, they ought to indulge Sleep, and shun all those Passions, that put the Blood into a Hurry, they ought in a particular Manner to keep a strict Eye on all their natural Discharges, of Blood especially, and see that they be promoted again if they fail.

The *Air* deserves to be consider'd as one of the Introducers of *Jaundices* ; for if it be too hot, it makes our Blood too inflammatory and obstructive, by calling off too much of the perspirable Matter thro' the Pores ; when fat, sweet, and spicy Victuals, when Onions, Garlick, and the like, are made too common, or when generous Wines are too much insisted upon, a Jaundice does often ensue : It has acquir'd the Name of the Kingly Disease, (*Morbus Regius*) from no other Reason, but that it is frequent amongst Noblemen and Courtiers,

Courtiers, who indulge too much in Debauches of all Kinds. Exercise, especially after a plentiful Meal, is apt to introduce Jaundices, because the Victuals are hurried into the Blood before an entire Digestion, and any gross Blood is apt to stick in the small Vessels of the Liver, and cause Obstructions there : There are not any natural Discharges suppress'd, that don't hazard a Jaundice ; for a Fulness of Blood occasions a greater and more rapid Motion of the Fluids, and also a gentle Feverishness, and all Fevers exhale the thinner Parts, and leave the grosser behind, which are apt to produce Obstructions. Those Passions that raise an excessive Swiftneſs in the Fluids, do in like Manner carry off the thin Parts, and cause Obstructions. Let therefore Persons subject to a Jaundice, avoid a hot or scorching Air ; let their Diet be moistning and cooling, but yet such as gives us no Room to apprehend Obstructions ; wherefore here let us imitate our Neighbours in boiling Endive, Parsley, and Fennel in our Broth, for they are gently opening ; they must avoid all Sorts of Fruits ; they must make use of moderate Exercise, at a good Distance from their Meals ; Sleep, moderately indulg'd, is convenient, for too long Sleeps render our Juices sluggish : the Belly must always be kept open, and they should avoid Cares and Troubles, which have often caus'd Jaundices in those who were never subject to them. The Flux of the Gall to the Guts is variously hindred, to wit, by
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the fix Non-naturals, but as we have spoke of its Consequences above, no more shall be added here, than to observe, that if upon any violent Exercise, or upon sultry Heats, we cool ourselves too suddenly, either by drinking very cooling Liquors, or immersing ourselves into a cold Bath, we condense a Blood too much rarefied, on a sudden, we congeal the Fluids, and over and above the former Obstruction, which appear'd in the Form of a Jaundice, we endanger the worst of Fevers, to wit, an inflammatory one, and it is odds but we throw the Patient into a fatal Pleurisy: And I must therefore inculcate this Caution to all such as would avoid such a terrible Evil in Jaundices; other Faults shall be spoke of below.

The Cleansings of Child-Bed Women are often suppress'd from evident Causes, which ought to be known, in order to avoid them: First then, Cold is capable of producing this dangerous Effect; for if the cold Air be admitted into the Womb in the Time of Labour, as indiscreet Women do often experience, and there constringes the Mouths of the Vessels, which are at that Time very open, or thickens the Blood that should drop from them, or congeals the phlegmatick Humours in the whole Mass, for these Sort of Constitutions are most subject to receive Damage at this Season, or closes the inward Orifice of the Womb sooner than usual, this Distemper happens: It sometimes also happens that, by reason of a grievous Passion of Mind, such as a Fright, or great Appre-

Apprehension, these Cleanings are intirely stopt, because such an Accident stops the Blood's Motion at once : They are also very often suppress'd from an indiscreet Change of Linen, which may be wet, or too cold ; and as by the Course of Nature they ought to be kept in a continual Sweating all that Space of Time their Cleanings should flow, that is, for about seven, nine, or twelve Days, according to each Woman's Constitution, it must be a very great Imprudence to act in the Manner just mention'd : It can never happen that Women should have this Flux suppress'd, without a sensible Damage, and Danger of Life ; and it is more or less hazardous, according to the Causes and the Seat of the Disease ; there is less Danger where it sticks only in the Orifice of the Womb, than in the Womb itself, where it clings too close to the Vessels, and endangers an Inflammation and a Fever, both fatal in themselves ; for this last Case brings on a Distension and Swelling of the Womb ; by this Distension, and the Acrimony of the stagnating Blood, it naturally introduces Pain, and the retain'd Parts being in some measure reconvey'd to the Blood and Heart, a Fever ensues ; the Matter stagnating degenerates into Corruption, the watry Parts run out, and leave the sharp Corruption behind ; This galls the Womb, and causes an Inflammation, which at last terminates in an Abscess or Ulcer, and then stinking and purulent Stuff runs forth, and an invincible Disease is produc'd, which

which makes them miserable for a long Time, and then carries them off; nay, I have seen *Cancers* occasion'd from such wretched Management, where all those Evils that attend a horrid Torture must be their Portion. I must therefore press it Home to the Midwives, Nurses, and Child-Bed Women, that they give no Handle to such dreadful Consequences. There is an opposite Fault to Suppressions of the Cleanings, for they often flow too much, from a Laceration of the Vessels where the Midwives precipitate the Delivery; for it happens in Miscarriages, as it happens in unripe Fruit, which is never pluck'd without damaging the Stalk, or the Tree, or both. There are indeed many other evident Causes of this immoderate Flux; such are the giving too many forcing Drugs to ill Women for bad Purposes: These are Evils in which Kitchen-Physick has but ill Success; however, the former must live upon nourishing, but thin, Diet, and the latter upon thickning Meats; the first must encourage Warmth and Sweats, but the latter must keep cool and without Motion; and as the Faults have been made mention of, they must be carefully avoided.

There is a Distemper of the Stomach, by which every Thing, whatever Patients take, is voided unchang'd; it is a great *Indigestion*, and the evident Causes introducing it are the following: The Air leads the Van, from it many Evils arise; it being much corrupted, produces Epidemical Diseases, that have been

so often experienc'd to rage furiously ; and yet how necessary it is for the Preservation of Life, all the World knows. It enters the Body by many and various Passages ; but in a more particular Manner it enters our Stomach, by the Conveyance of the Spittle as its Vehicle, and there does us Good or Harm : When it is temperate and good-condition'd, it helps our Digestion, as well as gives an Appetite ; and it does Harm, when it is cloudy, thick, and foggy, or loaden with metallick Steams, it produces stupendous Effects ; and being mix'd with the Blood, its finer Parts are convey'd off by Perspiration, whilst its grosser remain in the Blood, and render it thick ; from which Corruption every Evil is to be apprehended : It renders the Juices it first mixes with deprav'd ; it lessens Hunger, and the Digestion of the Chyle ; it is the original Cause of spontaneous Lassitudes, and often retards the Motion of the Spirits ; whence may the Reason of our Drowsiness in lazy and dull Weather appear. Victuals unmercifully devour'd are also a main Cause of this Disease ; for as Liquor too copiously taken down destroys the Wrinkles of the Stomach, and makes it slippery, and if they are also acrimonious, they excoriate it ; so grosser Meats, and such as are hard of Digestion, do produce viscid and tenacious Humours ; By these the Ferment of the Stomach is impoverish'd or enervated, so that cold, watry, gross, harsh, fat, smoak'd, and salted Meats, as also Fish
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of all Kinds, Milk-meat, and Fruit, are prejudicial to this Distemper. Sleep, if it exceeds its natural Limits, causes a Viscidity in our Humours, and heaps up Phlegm; nay, Watching to Excess often dissipates all that is thin, and leaves our Humours gross. What I have said of Sleep and Watching, I say of Motion and Rest, because we may well compare an idle and unactive Life to Sleep, and excessive Motion to immoderate Watching, and therefore they vitiate the Blood much alike. If Things that ought to be secreted are retain'd, and, on the contrary, those which ought to be retain'd are separated, the Good will depart from the Mass of Blood, and the bad Humours will remain: If the Blood has no Particles left but such as are vitiated, it must necessarily foster and cherish Diseases; for they breed tenacious Humours and Obstructions. As for the Passions of the Mind, they ought to be void of Hurry; wherefore chuse in this Disorder a warm and dry Air, to lead your Life in; every one knows that travelling into a warm Country does Good in this Case. Let your Victuals be easy of Digestion, such are Lamb, and other young Animals, especially of the winged Species, but not Water-Fowl, Pullets, Partridges, and the like; Pears and Quinces, bak'd with Cinnamon and Cloves, are the only Fruit that can be allow'd for Diet; but the Patient must be careful of eating too much of any Thing at one Time, because the Guts being slippery, let any Thing pass

that is too heavy : for at this rate we should bring the Patients to a mere Flux of Chyle ; let Nourishment therefore be taken often, and little at a Meal. What Liquor they do live upon, let it be Red Wine, and now-and-then an Orange may be ventur'd upon. As to their Sleep, Rest, Watching, and Exercise, let them be moderate ; too much softens and effeminates us, but too little has also the same Effects : Take care that we make a larger Quantity of Water than usual, because by such a thin Discharge, we shall enable the Stomach to recover its strong Tone ; for if the Fibres and Solids are at any Time too much relax'd, a Drain of the watry Parts of the Blood being made, these Solids do again recover their Tone. It is upon this Head and Distemper that Mr. *Fuller* praises, if he has any Meaning at all, Exercise ; for a Stomach wash'd with Liquor, is render'd flabby and incapable of holding any Weight : and as Exercise encreases Perspiration, it lessens the Quantity of Water that render'd the Stomach in this Case so weak, and so abates the original Cause of the Distemper. We must lastly study to keep our selves serene and free from Passions ; did we not know that some have died of Grief, and others of Joy, we would have some Reason to doubt of their Efficacies upon human Bodies, but as it is certain their Excesses produce dismal Effects upon us, in this Case then keep free from Storms, that will overwhelm you.

Sleepy

Sleepy Diseases happen chiefly in Winter, because at that Season the Pores are shut, through which that Matter, which us'd to be sent thither, is not so readily dispers'd, but remains within us, and fills the Vessels, which the smaller they are, must be the more easily seiz'd; and these Diseases do the more surely attack Mankind if the Winter be very cold and raw, or moist, for by the intense Cold the Vessels are strongly contracted, and Blood much condens'd. In like manner, Men between thirty five and fifty are subject to these Diseases; for at this Stage the natural Vigour begins to abate, so that all our Humours are more and more condens'd and thicken'd, and are circulated more slowly; our Solids also grow more rigid, and don't admit of so easy a Passage of Fluids through them, as in our younger and more tender Years: It is also agreeable to Reason, that the weaker Sex should be oftner seiz'd than the Men, if it be true, as it certainly is, that Womens Bodies are weaker, and abound more with Impurities than those of the Male kind: Some Poisons have a soporiferous Virtue, by which the Takers are oppress'd, and thrown into such Distempers; so a Raving along with the Sleepiness arises from the Use of Henbane Seed, even whilst it is lodg'd in the Stomach, all which Symptoms vanish upon vomiting; Opiumes imprudently made Use of, in lieu of good Effects, which rash Men, and the Unskill'd in Physick expect always from them, do very

often leave behind them most terrible Symptoms, which are not relieved without great Judgment, and in particular, they give Origin to these sleepy Diseases; for *Opium*, by its Bitterness and its glutinous Parts, both which it has, acts upon the animal Spirits, by chaining them, especially if we contemn the proper Rules concerning their Use, violently; all Opiates are to be given in small Quantities, and at proper Distances, and we must avoid giving much at once: If then they be given too plentifully, they do not only condense the rarefied Spirits, and chain those that move too swiftly, and, in Proportion, modify our Humours and Motions, but they sometimes do so quell and subdue them, that they scarce can be unfetter'd, or put in Motion again, and the proper, circulatory, and intestine Motions are at an End, and Death ensues; for altho' Opiates be one of the greatest earthly Blessings we enjoy, and Things, without which a great Man protested he would not practise Physick, if they be used with Discretion, and according to the stated Rules; yet in the Hands of ignorant Men they do equal Execution with the Sword: For both the containing and contain'd Parts are greatly injur'd thereby; *those*, inasmuch as they are relax'd and weaken'd in their Tone; *these*, inasmuch as they are stifled in their Course, and quite stopp'd, or, however, are alter'd in their Consistence, and put on a grosser and more tenacious Consistence, upon which Account, they at last stand

stand still ; and in this very manner do all our Liquors or Diet, which cause a Stupidity or Drowfiness, act their Parts. These Diseases are also occasion'd from malignant Fevers, from Inflammations of the Brain, and many other Causes of the like Nature. Hurts on the Head do also bring on Drowfiness, namely, great Wounds, Strokes, Falls, Contusions, and Depressions of the Brain ; 'tis well known, that great Eaters and strenuous Drinkers seldom fail of being subject to these Disorders, and particularly Brandy-Drinkers are well known to be often seiz'd with them : Nay, sometimes the very Steams of Wine, working in Cellars, of Charcoal, and of common Coal will produce these Effects, as I have experienc'd at a western Port, where a Ship took Fire, and the Steams of our *Channel Coal* sufficed the Mate, that he must have certainly dy'd, if timely Assistance had not been at hand, having laid near seven Hours as dead : *Hildanus* gives us a like Example of one who was suffocated by the Steams of a new-made Furnace ; *Bartholine* tells us, that he once saw a Lethargy produc'd from a St. *Anthony's* Fire repell'd ; and *Hildanus* says, he saw the same arise from a Palsy, where Medicines were apply'd to discuss or open the Obstructions ; a certain *Roman* Lady suffer'd herself to be bit by a venomous Creature, in order to bring on this Drowfiness ; the Story is too well known to rehearse it. As soon as a Tarantula has bit a Person, they fall fast asleep. We have

known violent Pains of Labour, and hard straining to Stool, give Rise to incurable Apoplexies, but then this happens mostly in full and plump People; soporiferous Steams are often exhal'd from Mines, which first cause a mild and gentle Sleep, and which grow gradually, 'till the whole Blood is congeal'd and stands still; there are some, who by drinking unmercifully of Mineral Waters, that have brought on Lethargies, and nothing is more common than for those who exceed in their Quantity of Drinking our *Bath Waters*, to be very drowsy: As it is very necessary a Physician should know the Virtues of Drugs, so it is very useful for him to know the Properties of our Diet, that he may know what Rules to prescribe to his Patients in their Victuals: In these Cases they ought to live upon a spare and thin Regimen, to wit, upon Broths, in which Aromatics are boil'd, as well as cephalick Herbs, so that he may attack the Disease not only with Drugs but Diet also: Their Liquor ought to be generous Wine, that is spic'd, but avoid that which has been steam'd with Sulphur, as is too commonly done, because this Steam is an Acid, and it is made Use of by the Vintners, to curb the too high Fermentation of their Wines; wherefore, as the Juices are already too gross, there can be no Occasion to run the Risque of drinking Liquors thus manag'd: But more of this kind of Disease when I come to treat of an *Apoplexy*.

A Suppression of the Menstrual Flux has many Causes to produce it; nothing is more common than for the poorer Sort of Women to have these Suppressions, from walking bare-footed upon the cold Pavements; hence what Damage may be received from the external Air or Cold, is easy to see from this one Instance: If your Arm be tied strait, till it swells and grows red, and be then immerg'd in cold Water or Snow; if after this you untye it, the Blood returning slowly to the Heart, will occasion a Swoon: In like manner, if the Blood be rendered gross, and by any Means, its circular Motion is retarded, if not intirely stopt; Cold contracts, that is, tyes up the Mouths of the Uterine Vessels, and stops this Flux. Fasting, or a spare Diet prevents a due Quantity of Humours to be heap'd up in the Vessels, as we see happens in a Chylous Flux from the Belly, where the thinner Part of the Chyle is carried downwards, and none, or very little, is carried through the Lacteals to the Heart, so that the usual Quantity is deficient, nor are the Vessels fill'd enough for producing such a Flux: It also often happens, that a profuse Flux of Blood has preceded, and the Blood is more slowly bred; and from this Cause a Stoppage of this Flux happens, and they continue stopp'd for some Months; and if a Flux of Water draws off the necessary Quantity of the Serum from the Blood, as happens in Dropsies of the Belly, they will also be suppressed;

pressed; Chalk, Turf, Coals, Lime, and such Things, eat in a plentiful Manner, as is the Custom in deprav'd Appetites, give a Handle for this Suppression; and if you are inclined to know the State of the Blood after such Diet, do but draw Blood, and you will find it almost void of Serum, and consequently gross and thick: Lastly, violent and sudden Frights, Melancholy, and such Passions as give us dreadful Apprehensions, do greatly conduce to produce this Evil; so far, that by a Fright, I have known them so suppressed, that nothing could ever make them return. Now, as a proper Regimen is absolutely requisite for preventing, as well as curing Diseases, I shall here subjoin what is worth Observation; they ought therefore, who would secure to themselves a regular Continuance of this useful Flux, to take Care that the Air they live in be warm, either by Nature, or made so, making plentiful Fires to heat it; for Cold, you see, causes the Disease: they ought to feed upon Meats easy of Digestion, and if the Blood be too gross, they should eat Victuals well season'd with Spices; they should refrain from all sour Diet and Fruits, because Sours make the Blood thick and obstructive; they should refrain from Victuals of the Feet of Animals, or of the internal Bowels; as also from Jellies, because these are too viscous: Let their Liquor be well boil'd, and well fermented; they should avoid all thick Liquor, such as Mum; they should

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now and then boil a little Pennyroyal, or Rue; or Marjoram among their Wine. Moderate Exercise is very proper for them, because Motion makes the Blood circulate, and Rest causes it to stand still; if it be immoderate it thickens the Blood, because it exhales the Serum by the Pores, or causes it to pass off by Urine, and leaves the Blood gross. It is better to exceed in Watching, which keeps our Humours moving, than in Sleep, which helps our Blood to stagnate and grow thick: See carefully that Nature answer all her Debts; once a Day expect a Stool; expect also to make Water in the same, or near, Proportion to what you drink: Every Month be careful of the Quantity of your Monthly Flux; if you exceed in it, the next Period you may suffer for it; if it be too sparing, drink, in the Time, some Dishes of Pennyroyal Thea Morning, Noon, and Evening; or, if you please, of Thea made up of any agreeable Aromatick or Fœtid, such as Marjoram, Saffron, Rue, Marygolds, or the like, because these may be readily got or pluck'd, and they are quite as efficacious as any kept in the Shops of our Apothecaries. They ought always, at that Season, to avoid any Trouble or Concern, which are too well known to curb that Flux.

In Hypochondriack Melancholy the Air has a great Share, we cannot live without it for the Space of many Minutes, and being inspired, as well as entering through the Pores,
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it alters the Humours in a various manner; more especially, a moist and rainy Weather so unstrings us, that a rainy Day has a sensible Effect of making us vapourish and dull; our Aliments and Liquors have also a great Influence upon us, either to introduce or increase this Disorder: Watching excessively spends our Spirits, and renders our Humours distempered; and yet long Sleeps vitiate the Blood, by making it viscid and sharp: Excess of Motion or Ease have the same Consequences as Watching and Sleep; our Secretions being irregular, do greatly disturb Human Bodies, for if those be retained which ought to pass off, or if those pass off, which ought not, great Evils ensue; witness Suppressions of the Menstrual Flux, Costiveness, or their Contraries: And the Passions of the Mind, over all the rest, are capable of producing stupendous Alterations within us, which alone are the most frequent Cause of this Disease; for Troubles and Vexations consume the Spirits, and never fail of causing great Disorders. Let the Air therefore be greatly regarded; if it be too hot, let it be cool'd artificially, by sprinkling your Chamber with cool Herbs moisten'd; or, if it be too moist, let it be well aired with Fire: Eat but little at a Time, and suit the Diet to the Occasion, and their Liking and Agreement, for if the Blood be too adust, we must feed upon Liquids, and frippery Victuals, such as Gruel, Panade, and Creams; if only too viscid,

cid, we must eat fresh, and young Animals seasoned with Spices: We must suit, however, the Patients Palate, and leave the Choice of convenient Diet to themselves, and great Care must be taken to observe what agrees with them; we must necessarily avoid what they have an Aversion to, or what disagrees with them: Suppose there be no natural Antipathy against any Diet, and yet it disagrees, it gives a fair Hint to a Physician of the Cause of a Disease; for Example, If Puddings or Eggs disagree with their Stomachs, and they had no Aversion to this Diet, when they enjoy'd Health, it is a Sign that a viscid Diet is prejudicial to their Disease, and that such Diet, as is known to enjoy contrary Properties, will be convenient either in Diet or Drugs: If the Gentlemen of the Profession would care to speak out, they would acknowledge, that they sometimes have no other Method to judge of the Cause of a Distemper, and a very good one it is, if it be rightly applied. As Sleep, Watching, Exercise, and Ease, fall under the same Predicament of Motion, we have no more to say concerning them, than that the Patient must be guided by the Advantages or Damages reap'd by them, which they are capable of judging of alone; such long Illnesses, as this Disease is, give Room enough for Observation. Stools ought generally, in this Case, to be promoted, for few Melancholics are loose, unless by some great Accident, and they are most gently promoted by Glisters,

sters, which may be made up of Milk with a little crude Allum, and strain out the Whey for a Glister; and Experience testifies, that this easy Method does a more effectual Service than any Physick whatever: We must also give a strict Eye towards all other natural Discharges, and see that they proceed according to Nature's usual Manner. The relieving exorbitant Passions, must be the Care of By-standers, their Spirits are to be sooth'd by Reason and Persuasion, as well as Diversion; this is a jealous Passion, and altho' you ought never directly to contradict those Persons, yet, if you make a servile Compliance, they suspect you, and you are never more their Friend; nor, indeed, do they continue any one's Friend long; so that if they be People of Distinction, they ought to employ all their *Posse* to find out whose Advice and Company they like best.

Nephritick Pains, or Pains of the Kidneys are of two Sorts, to wit, the *warm* and the *cold*; as to the warm, it is produced by an intense Heat of the Air, where there is a great deal of Fire communicated to it from the Sun by all Spices immoderately taken, such as Pepper, Ginger, Mustard-Seed, old Cheese, Garlick, Onions; or by strong Diureticks, such as Tincture of Spanish-Flies, of May Worms, of Hog-Lice; Oils of Savin, Juniper, Turpentine, and the like; by an Abuse of Brandy, by long lying on their Backs, by violent Exercises, especially of Vener

Venery, and by Suppressions of Blood, and other usual Discharges: In short, whatever occasions an Acrimony in our Humours, will hurry on this kind of Pain; Salt therefore and salt Meats, Cloves, Cubebs, Poisons taken in small Quantities, and often, and even a general Fulness of the Vessels does often introduce it; they must avoid all these Causes, and over and above, they ought to use Glsters frequently, and a good deal of Oil; the first soothes, and the latter relaxes the Pain. As for the *cold* Nephritick Pain, that is generated by the following Causes, to wit, a rainy, cloudy, cold, Sea Air, viscid Aliments, such as Milk-Meats, Sours, Salt-Fish, dry'd and hung Victuals, viscid Plants; and, in short, whatever will render the Blood salt and gross; for the Viscidities fit the Juices to stagnate in the smallest Vessels, and then the saline Parts exert themselves in pricking the Membranes: In Case of the Stone, the earthy and viscid Parts swim united together in the watry Part of the Blood; the Viscidity of the Juices, and the Minuteness of the Diameter of the Gravel, are easily suspended in the Blood, till they meet with a straitned Channel, or till they accumulate and stop up the Kidneys; four Liquors, such as Beer, unripe Rhenish Wine, Rye Bread, without Barm, made only with Leven; Fruits, such as Cucumbers, Pompions, Melons, Chesnuts, Medlars, and the like, a sedentary Life, long Sleeps, but more especially such Naps as are taken

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in an Afternoon, before the Victuals are digested; and, lastly, Passions of the Mind: These are the evident Causes which Patients are to avoid in Nephritick Cases. One Thing more must be observ'd in this Place, to wit, as the bleeding Piles are generally found of Use in either Case, but more particularly in the warm Pain of the Kidneys, if they don't offer naturally, do you promote their Flux by applying Leeches; for by this Contrivance you will unload the Vessels, and ease the Pain. These Pains are common Attendants on old Age; it is hard that Age should be follow'd by Infirmities of this Kind, because they can't move enough to get rid of them. I shall moreover add, that whenever you perceive somewhat fatty to swim upon the Water, or that the Urine is muddy, you may immediately guess how necessary it is to apply proper Remedies, or you must expect to incur the Risque of these Pains. Dr. Ratty, from good Authority, reckons up as one Cause of the Diseases of the Kidneys, a *Compression* of them; and certainly in a studious or writing Life, the Body is kept bending downwards, the Bowels then are press'd together, and consequently the Kidneys, their Ducts are straitned, and a free Passage is denied to the Fluids, much more to the small Solids; so that whatever can be imagin'd to arise from such a Stoppage, must be the Consequence of this Compression: It ought, in a very particular Manner, to be avoided; and
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if, by such Mismanagement, any Parts or Fibres are closely press'd together, and remain so after a Removal of this evident Cause, that Diet that will relax, and at the same Time return the proper Tone of the Fibres, or push forward the Juices, must be convenient; wherefore Butter, Oil Olive, Cream, Milk, and all that will sooth, are proper to relax: And in order to push forward the Fluids; all Spices, such as Cloves, Cinnamon, Pepper, Mustard-Seed, Ginger, and the like, are required: And, to be short, if Inflammations be absent, nothing conduces more than Bath-Waters for such a Compression, because they relax the Vessels, and fill with Fluids in such Proportion as they are taken, and because, by their Heterogeneous Parts, they push on the Blood through the minute Channels, so that there can't be a more sovereign Remedy, in the Case before us, than they are.

Phrenzies are often introduced by our Mismanagement of our Non-naturals; for the Air is our most common Enemy as well as Friend: If the Air be sultry, and loaden with Fire, it makes our Humours also on Fire; the watry Parts of our Blood are exhaled, and the active Parts approach to each other, and being very dissimilar, or containing Parts very differing from each other, in the Course of the Circulation, these Parts, sharp and bitter, saline and sulphurous, and, as *Hippocrates* says, of a thousand differing Tastes,

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do all meet and jostle together; and having contrary Properties, do heat and cause a Feverishness; thus far is natural upon Heats: But then the Parts, by these Tossings, are made very thin and hot, or very hot and thick, and do change the natural Texture and Consistence of the Blood and Juices, and proportionable Injuries are done to the Parts it passes through; for so much as it deviates from a natural Composition and Thinness, or how much bigger are its globular Parts than usual, or how much thicker or thinner are the Cases in which the elastick Parts lodge, so much more do the Patients suffer: If the Case of a Globule be too thin, it will break; and if this be the Condition of the whole Globules, they will lose their elastick Parts, and the Liquor will be disturbed every where, and grow incoherent, and lose all its fibrous Parts; if their Cases be too thick and glutinous, they will prove less elastick; they will stick in the least and invisible Arteries, and swell them, and make them visible to the Eye. This latter State of the Blood is generally productive of Phrenzies, because, if we consider the immediate Cause of a Phrenzy, we find it, by Dissection, to depend upon a certain Tract of the Brain become red, and charg'd with Vessels that never appear in a natural Brain; to wit, an innumerable Number, as I may say, of red Threads appear in a certain Tract of this Organ, and the Patients raved on and died: It

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is natural to conclude, that this Raving, or furious and unconnected way of Thinking was occasioned by this preternatural Redness; and upon going to the last Twig of these little Vessels, there is found some glutinous Matter sticking, that puts a Stop to this red Liquor's Motion; and this Physicians call an Inflammation: And, without diving deeper into Matters producing *Ideas*, I am no more surpriz'd, that the Functions of the Brain should be disturb'd and destroy'd, at last, by such an Accident, than that the Motion of an Arm or a Leg should be prejudic'd or lost by an Inflammation on a Joint; if the Muscles and Tendons be inflamed, and if their Actions depend on a free Circulation, the Interruption of this must necessarily produce the former: So then, the hot and sultry Weather has jellied the Blood, by exhaling the natural Quantity of watry Parts, and by leaving little behind, save Globules, with thick Cases and Serum, or Jelly, which two, all know, are unfit to be circulated without Water; and moreover, the Salts that do also naturally swim in the Water, are imbib'd into the Jelly or Globules, and they give a Sensation of Pain; so that where-ever such condition'd Blood is resisted in its Motion, there will the Scene of Action be placed: And if in the Brain a Phrenzy commences, we see then how Ravings in Fevers, or Symptomatical Phrenzies, as well as original ones, are produced by the Air; but

our Diet, and especially our Liquors, have a far greater Influence, for high Living, on Salt Meats, Spices, and hot Sauces, and particularly drinking strong Wines or Brandies in a plentiful Manner, disposes our Blood to grow thick and hot, that is, Inflammatory, and I have known a great many become frantick from this Cause: Strong Exercise and long Watchings have a large Share in producing such a Condition of the Fluids; and if we examine our Secretions, there we find a large Field for such a Disorder; we have known Men and Women turn frantick upon a Suppression of the Bleeding Piles, or of the Menstrual Flux, for Blood retain'd will, by its Quantity and Salts, cause an exorbitant progressive, or circular Motion, and that ends in a Grossness of Blood and a Quantity of Salts; so that whenever this diseased State commences, there will Danger ensue; but far the greatest Danger hangs upon the Passions of the Mind; Men have been known to be cast into a Phrenzy in an Instant, by the mere Force of Anger: However, suppose it moderate, but frequent, this, in a certain Space of Time, will act as surely; for Anger is Anger still, whether it be violent or moderate, and repeated; it shakes our Fibres furiously, and they toss the Blood round more rapidly than usual, so that still the watry Parts exhale, and leave the Mass hot and gross. Thus have you seen, in few Words, how Phrenzies may be introduc'd; let us try what Kitchen Methods

thods will avail against such a dreadful Disease : Beyond all Things Bleeding becomes necessary, Ladies command their Servants to be blooded upon Trifles, but here is a Case that demands it with a Witness ; Bleeding must be immediately put in Practice, with a discreet but plentiful Hand ; it must be done, and repeated as often as Occasion requires, and the Strength of the Patients demand it ; bleed in the Arm or Foot, according to the Country you are in, in warmer Countries the Foot is best ; when you have done this to a certain Measure, the Blood grows calmer, and runs slower to the Part injured, for it does not run so forcibly to those small but distended Vessels, wherefore the Morbid Parts are no longer deposited on the Part affected, and moreover, when the Blood is diminished, the Vessels contract themselves in Proportion, as the Blood has been drawn off ; hence do the Orifices also contract, and suffer no more to enter ; and besides, when the Blood is appeased, so are the Spirits also, and all becomes quiet ; but to be secure, and to kill two Birds with one Stone, we ought to study how to chill the Air by all natural Means, by sprinkling the Floor with Water, or cool Herbs water'd : The Diet must be smooth, and not at all hot ; it must cool without the Danger of causing Obstructions ; it must check the Motion of the Blood and Spirits, they must avoid all pepper'd, saltish, all aromatick, and all acrimonious Diet ; they should

live upon Kitchen Food, made of Rice, Almonds, Milk, unsalted Broths, poach'd Eggs, Barley, and every thing that can temper the Acrimony of the Blood, and their Liquor should dilute and smooth, it ought to be Water, pure elemental Water, Whey of Milk, or sometimes small Beer, Ptisan, and whatever is watry, in which it were convenient to put a little Salt-petre, which is a fine Cooler and Dissolver of the Blood; the Patients, themselves, wanting Sense, must be put in mind of drinking often. There was an old Physician, who was called to some Gentlemen, that had all made themselves frantick with a Week's Debauch; he, after bleeding them plentifully, made them sit down and play the good Fellow with Lemonade, and ply'd them thus with what they call'd very good Punch, till their Bloods were cool'd; after which they slept and recover'd. Let them be kept quiet in Bed, and dissuaded from entertaining any Anger or Hurries of their Minds, for fear of increasing the Inflammation; because, as inflam'd Parts must not be mov'd, so the Brain's Motion is Thought, and therefore such diseased People must be kept from anxious Cares, or Thinking, or Anger; the Chamber therefore, in which they are, must be darken'd, the Windows and Curtains must be shut, that the Light may not enter, because it moves the Spirits, and must therefore be kept out: Give them all the Opportunities you can to sleep, and

and keep free from moving any where : Care must be taken that all natural Evacuations (of Stools, Urine, the Piles, or the Menstrual Flux) be promoted in due Time and Quantity : Stools must be promoted by Glisters ; they must be put in mind to make Water, either by calling upon them, or by anointing the Perinæum, or Part between the Legs, and Share Bone with Oil of Amber, or of Euphorbium, or of Castor, or of Scorpions, or by giving inwardly Turpentine, or Salt of Bean Stalks, or of Wormwood, or of Broom Ashes in their Liquors ; or, lastly, by a Catheter, for that must be done.

Hysterical Women are highly prejudiced by the six Non-naturals ; and first, as to the Air, which, according to its various State and Condition, can alter and change our Body in divers Manners, whilst it is mix'd and infested with Vapours and Steams, whilst it is cloudy or rainy, and because, as Fishes lead their Lives in Water, so does Mankind in Air ; hence is it not at all wonderful, that Mankind should be ill from it, when it is corrupted, or well, when it is pure ; for the Air containing some pestilential, or some other Fault, being drawn in, does, by Contagion, deprave our Humours, from whence happen an Infliction of grievous Diseases, or a great Loss of Spirits : And as a moist and cold Air heaps up Phlegm, and the same being violently hot, increases Choler ; so also bilious and phlegmatick Humours are made

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from our Victuals and Liquors, that is from such Things long continued that are either too viscid and phlegmatick, or too acrimonious, aromatick, and spirituous; the same also is produced from Sleep, Watching, Motion, Rest, and the Passions of the Mind; for from any Excess of one of these, the Phlegm, the Choler, or the Force of the acid Spirit, increases and depraves the Humours; and more especially the cold and moist Air contributes to produce this Disease, and also the Northern Winds contribute much to it; inasmuch, as by this Means, a Heap or Load of vicious Humours, especially of phlegmatick ones, are gradually produc'd in Womens Bodies, both by Reason of the Constipation of the Pores from the external Cold, and the Stricture of the Mouths of the Vessels: Hence is the Ferment of the Stomach; and the Spirits themselves, few or weak in this Sex, are overwhelm'd with abundance of watry Humours, and the whole Mass of Blood being render'd less and less fit for producing Spirits, and liable to Coagulations in many Cases, this Disorder is necessarily introduc'd: Now, from these Considerations, a satisfactory Account may be given of the Preludes of this Distemper, for the following Signs precede it; a spontaneous Lassitude or Weariness, with a Weakness of the Legs, a Paleness of the Face, with a sorrowful Countenance, a Loathing, which is sometimes accompanied with a Vomiting,

miting, an Aversion to Victuals, sometimes a Noise of the Bowels, which is often attended with Pain ; but when the Fit begins, there arises, in an Instant, a Difficulty of Breathing, and a Stricture of the Jaws, as also a Sense of Choaking ; they grow mute, fall into a sort of Sleep, their Bodies grow cold, then they lose their Senses, and their Legs are convuls'd ; when the Fit abates, Matter flows from the Womb, that Part is relax'd, their Cheeks begin to glow and redden, and then their Senses and Motion return : But all these Signs don't happen to all, only some in one and some in others ; for various and divers Symptoms are produced according to the Diversity of the Causes and Subject ; for sometimes there is felt, in the Throats of the Patients somewhat like a Globe sticking, which throws them into an Apprehension of Choaking, from which particular Symptom, the Disease has acquired the Denomination of the *Strangulation of the Womb* : Sometimes there is only perceived an Anxietude with the Sense of a Compression, as it were, of the Heart, or squeezing, as if they were about to faint ; sometimes there is felt somewhat like a Weight or Globe in the left Hypochondres which is press'd or squeez'd together by a Hand, as it were ; sometimes Belchings do attend them, which being got up, seem to relieve them for the present ; at other Times they are afflicted with a Difficulty of Breathing, and a Sense of lifting up of the Bowels
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into the Breast : Lastly, sometimes they are taken with very grievous Symptoms, such are Falling-Sickness, Swoons, Convulsions, Ravings, and many more, to make up the dreadful Tragedy : which various Symptoms are very dangerous ; however, we must not throw the Fault of all these Disorders upon the Womb, since most of them do happen from a different Seat ; moreover, it is worth notice, that this Disorder is observ'd in all States, more especially in cholerick Persons, in sedentary Persons, in Virgins, Wives, and Widows, in the old, in pregnant Women, in Child-bed, and others ; and the same does invade at certain Periods, more especially at the Time of the monthly Flux, and sometimes upon mere Accidents from the Air, Diet, Passions of the Mind, or others, that move the Blood and Spirits, and that it varies in Degrees, so that some few are gently, and many more are sorely afflicted with it. The next Inquiry should be concerning the Remedies ; but as no Diseases can be repell'd by human Skill, unless the Causes be first remov'd, to which they owe their Rise and Increase, the Original of those Causes ought to be look'd into, before proper Directions can be given. We find most Women hysterical, who have not their monthly Purgations regularly, or who, being well fed, and desirous of Venery, do not enjoy it : but as it is not enough to believe a thing to be true, unless we know it for certain ; for a Physician ought to know in Theory,

ory, what he cures in Practice ; and as all Knowledge in Physick depends upon the Experience of Particulars, which preceding found Reason accompanies ; for Physick is not to be built upon imaginary Hypotheses, but upon Effects and Appearances, which deserve a Speculation : Wherefore, that I may act regularly, I will explain to you the Causes of the abovemention'd Symptoms, which will be done much easier and better, if I briefly explain to you the different Structure of a Female from that of a Man's Body : But let no one here expect an exact History of the Difference between Male and Female, only thus far, that Women are by Nature colder than Men, and that therefore their Skins and Flesh are more tender, soft, and lax, and do therefore perspire less, which may be reputed one Cause of their menstrual Purgation ; but Men, on the contrary, are by Nature warmer, have their Bodies more patent and perspirable, their Skin and Flesh are harder, and more fibrous and porous, and instead of that menstrual Flux, this Perspiration suffices ; to which if we add the Fatigue and Labour of Men, we may readily see how they have no need of such Discharge ; and Women who give themselves up to Labour experience, what Effect that has upon their menstrual Flux, because they rarely are troubled with it : A Suppression then of such a Flux, where nothing recompences, is acknowledged by Physicians unanimously to be the cause of this Distemper, because it fills our

Veins

Veins with Impurities. Both Reason and Experience confirm, that gross Aliments used with Continuance do enervate the Ferment of the Stomach, and this being once obtunded, the Chyle is thrust downwards into the Canal of the Intestines in a crude Condition, from whence it passes into the Blood, unfit for either the progressive or intestine Motion; and these Causes affecting Women for some considerable Time, give Rise to such a Disease; for the Blood being gross, crude, and fix'd or spiritless, being watery or phlegmatick, all the Parts it arrives at are tainted with these Faults, so that the Temperament becomes cold and sour or gross. These Causes concurring, there is heap'd up a large Quantity of phlegmatick Humours, which are obstructive, and do therefore find a Difficulty to pass thro' the Glands, the Pores, and smallest Vessels, from whence it follows, that there must be much Matter retain'd. The greatest Portion of this gross and crude Blood settles upon the Parts of Generation, by reason of their depending Position, and the Weight of the Humours, and there they stick and obstruct their Passages, and hinder their monthly Flux, whence a Load of Humours, which used to be thrown off, is further added to the Mass; great part of these Humours reside in the Womb, and grow sour and pungent, and occasion an irregular Flux, from which Accident many Symptoms of ill Consequence are produced; while the Flux is on foot, these Symptoms abate; when it is retain'd,

tain'd, they become ill; so that the Disease keeps pace with this Flux: The other gross part of the Blood, lodg'd in the Ovarium, rests here, and produces from its Corruption various Irritations on the Nerves, and drives them into Convulsions of the lower Parts: These causes therefore, hitherto taken notice of by me, to wit, the phlegmatick Humours, the menstrual Flux, and the irritating Corruption in the *Ovarium* and adjacent Parts, seem to reside hereabouts, as in the principal Parts, from whence all the Disorders do arise, from whence the Fibres and Nerves are stimulated all around the Abdomen, and from whence all these convulsions spring, from whence those spasmodick Pains have their Rise, and such like. When the Evil increases, these malignant teams vellicate the Stomach and Bowels, which being thrown into Convulsions, the guts make a Noise, as if Wind roll'd along, and they are lifted up against the Diaphragm, and occasion a Straitness of the Breast by a convulsion of the Muscles of the Abdomen, which don't yield to Inspiration, and this convulsion is what the Women call the Rising of the Womb, when in reality it is owing only to the Convulsion of the Nerves in the Mesentery and Intestines, which swell them up; and when this malignant Humour rises higher, even to the Brain itself, the animal Spirits passing thro' it, are variously toss'd in the Meanders of this Organ, from an irregular Motion of them, and causes a Giddiness; or they enter the

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the Nerves of the Heart and the Muscles in a tumultuous manner, and raise Palpitations and Commotions every where, and if by any violent Shock of the abdominal Muscles, and of the Parts within, any Portion of Sperm should be thrown forth, when that is done, the Fit ceases, and an universal Weariness remains for some Days, join'd sometimes with Pains of the Head; and this is occasion'd by the great Consumption of the animal Spirits, and the jolting together of the Muscles; and the Pains are caused from some Reliques of the acrimonious Humours deposited on the Membranes, which by stimulating them bring on troublesome Sensations; for where-ever any Salts are lodg'd, they twinge the Parts, and cause a violent Flux of Humours thither, which further distend and tear, and give Pain. Besides these Symptoms, which, as I have made you see, arise from a subtile Vapour; for such the Spirits seem to be; others no less grievous and frightful arise from the grosser Parts of the morbidick Humour; for these being brought back to the Heart along with the remaining Blood, do lessen the intestine Motion and Generation of Spirits by their Crudities, the Motion of the Arteries, which depends on a strong Influx of spirituous Blood, will necessarily grow languid, the Circulation be retarded, and for want of spirituous Blood and Heat, the Face grows pale, and the Extremities grow cold. A Penury of animal Spirits in the Brain and Nerves follows a Defect of Spirits in the Heart and Arte-

Arteries; hence happen a trembling of the Joints, a Cessation of Motion and Sense; and another Cause of Respiration being intercepted, is a Defect of Influx of Spirits into the Muscles of the Breast, the Intercostals, and the Diaphragm, and Larynx; all which Symptoms do afflict, until the morbidick Matter be dispers'd, which happens sooner or later, as there is more or less of this Matter; the Fit sometimes declines with a deep Sigh, by reason of the intercepted Respiration returning with a Struggle and Difficulty. This morbidick Matter, which is the immediate Cause of other Symptoms in other Parts, ascending by the Circulation from the Womb and adjacent Parts, is carried into various Parts of the Body by the Veins which convey it to the Heart along with the returning Blood, or by the Arteries after it arrives at the Heart, or by the Nerves, whose Pipes and Ducts convey it every where, and particularly to the Muscles, where Convulsions so frequently happen. From all which it appears, that no one Part can properly be call'd the Seat of this Disease, since it wanders every where, and therefore is it universal. It is moreover evident, that this Disease is not a single Symptom, but rather a large Collection of Symptoms, which variously affect the Dis-eased: Mean while, as there is one most common Symptom attending this Distemper, we take the Name of the Disease from that; hence it call'd the Suffocation of the Womb, because it is very often attended with a Difficulty

ty of Respiration, and a Sense of *choaking*. Now as to the Regimen of the Non-naturals, and first, as to our Diet, if that be neglected, it will hasten as well as cause it; our Diet ought to consist of Victuals of tender Fibres and Juices easy of Digestion; avoid Salt-Meats, viscid Diet, such as Puddings, and the like; shun all Sours whatever; Pease, and all that Tribe, is dangerous; Aromatics are allow'd: Beer or Ale moderately hopp'd and well brew'd, and not new nor sour, but clear, is allowable; Wine and Water, so the Wine be a dry Wine, and not sour, is commendable; a Glass of Wormwood-Wine is of Use: Let them live in a dry and moderately warm Air; let them exercise moderately; they must indulge themselves in much Sleep; let them avoid all Books or Discourses tending to Debauchery, if they be single; but if married, a moderate Indulgence in caressing, is of Use; see that their Stools, Urine, and menstrual Flux answer in proper Time; and in a particular manner, have a care that nothing perplex your Mind.

Malignant and pestilential Fevers have puzzled the Brains of many Physicians as to their Causes; and if we examine the prejudiced Parts, we have tolerable Reason to conclude, that an *Acrimony* reigns in the Blood in such Fevers, as will appear in the following Account; and as the Consideration of any Distemper is most commodiously begun with taking a View of the Effects, or, as it is term'd,

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a posteriori, because by what is manifest we are led into the abstruse Causes, I shall follow this Method in this short Inquiry: and therefore I shall first premise the internal and external Signs. Among the internal Signs, we first meet with a burning Heat, which is very troublesome to the interior Parts and Bowels, and the higher is the Fever, the more observable is it in the Surface of the Body; a constant Companion of this Heat is a Thirst proportion'd to the Heat; moreover, they toss and tumble so extreamly, that neither Side can be laid on agreeably for any Time, and the Tongue grows black for want of Moisture, and with caustick Steams. Then arises a continual Loathing, and an Aversion to all Victuals, which is very often attended with Reachings to vomit, and at last violent Vomittings come on, and stinking and bitter Stuff is voided: To these are added, an intolerable Pain of the Head, which burns more or less, as the Humour is more or less sharp; hence naturally follow obstinate Watchfulness and Ravings, or however, according to the different Structures of the Brain, or the various Constitutions, a Lethargy seizes the Patients; next we observe an inexplicable Straitness and Anxiety of the Heart and Breast, which is succeeded by a Palpitation of the Heart, or Swoonings, and such like; the Pulse is always unequal, and often intermitting, sometimes imperceptible; externally we sometimes meet with Buboes or Inflammations in the Neck,

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Armpits, Ears, and Groin ; if it amounts up to be highly pestilential, then we meet with Carbuncles, which appear in the Face, Breast, Neck, and Thighs, in the Shape of little white, red, or black Pimples, that spread and burn. But Spots of various Shapes and Colours are common Appearances; some equal the Diameter of a Pea, others a Flea-bite, others resemble a Pepper-corn in Size and Colour, and these make their Appearance also after Death, as I have known a Flux of Blood happen from the Nose, and another from the Intestines, after the Patient was dead. The Violence of the Fever is guess'd at by the Number of grievous Symptoms produced by the acrimonious Salts, which as they rarely do all meet in one Person, the sudden Loss of Strength is the most sure Sign of all malignant Fevers, up to a very Plague itself: Moreover, there are observ'd certain secondary Signs, which betoken the Malignity of the Humour, and conduce much to help the Physician to prognosticate well, amongst which first, are foetid, bloody, or green Stools, but in others there is a Costiveness; secondly, the Urine, which ought to have a Sediment in it, resembles that of a Person in Health; thirdly, they sweat profusely, or little, or perhaps not at all; fourthly, Bleedings at Nose, and, in Women, at the Womb; but what is very remarkable, the Blood that flows forth does never congeal, but remains fluid, as I have seen in the Blood let ignorantly out from the Arm; fifthly, a violent

lent Pain in the Region of the Loins, where the small Guts are tied to the Mesentery; sixthly, in the Mouth we find Thrushes of various Colours, white, yellow, black, and the like. The Functions, for greater Convenience, are divided into the natural, to wit, depending on the Heart as their Origine, and the animal, depending on the Brain as their immediate Origine: the former sustain Life; the latter, the former. Both these Functions are prejudiced in malignant Fevers, as will appear anon. Every one knows, that Thirst is augmented by Salts, and by every thing season'd with them; hence do we see how many People greedy of Liquor, eat salt Victuals to make their Liquor relish; and whatever makes the Salt in the Bile more eager, does the same thing, namely, Anger, great Heats, and the like; and Thirst is a common Attendant on all bilious States of Humours, by reason of its Viscosity from the Oil, and of its Pungency from its fixt Salt; and this Effect being easily produced from common Salt, as well as from a fixt one, we may more readily grant it producible from a volatile one; and that Crust on the Tongue, which is either white and thick, or black and chopping the Tongue, depends partly on the Steams in Expiration, and partly on the Saliva, which being both of one Nature, do exhale the aqueous Parts, and leave the Remainder to fix upon the Tongue, and prey upon it, or even to ulcerate it; they dry the Tongue, and being of a viscid Nature

as well as caustick, there they stick, and corrode the Tongue: by the Heat and Moisture is all this done; for Moisture conveys the Salts, and Heat makes them tear. The *Thrushes* that appear do also proceed from the same Cause, namely, from caustick Steams arising from the Lungs and Spittle; the Blood being highly acrimonious, nothing can be secreted from it that does not partake of that Acrimony, and Excoriation being an Effect of some rude and rigid Salts tearing the Parts asunder, they must depend on them: this Acrimony is not always of one Nature; for that in the Blood varies, and therefore that in the secreted Humours must also vary: These few Reasons will convince us, that sometimes Thrushes do depend on an Acidity, first, because such Peoples Mouths being smell'd at, their Breath smells sourish; secondly, Children do often labour under Thrushes, depending on an Acidity, as appears by their green Stools, their curdled Vomitings of Milk, and such like; thirdly, Thrushes are often found in confirm'd Poxes, which do therefore proceed from an Acidity, both from the Nature of the Remedies, and by the Slowness of the Poison; and, fourthly, the Spittle tastes sour sometimes, and excoriates the Mouth; and hence are Thrushes more common in Northern Climates, from the Quantity of Nitre in the Air; neither is it contrary to Reason to believe, that these malignant Fevers do often proceed from a caustick Acidity, especially in

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our Clime ; for either Salt will produce lancing and grievous Pains, and other Symptoms in common ; by either Salt the Blood is eroded and made incohesive ; by either Salt the Parts and Fibres are corroded ; the Loathing is produced from the acrimonious Humours secreted into the Stomach, which twinge its Membrane, and cause an Influx of Spirits into the abdominal Muscles and Stomach, and occasion a Convulsion or Vomiting, a Loathing, or an actual throwing up all contain'd : It often happens, that People reach to vomit, but get nothing up at all, because there is little or nothing in the Stomach, only a Quantity of sour or acrimonious caustick Juice, that continually frets the Stomach : So that Vomiting and Loathing differ not much from each other, only Vomiting proceeds from a stronger Cause ; for Loathing always precedes Vomiting ; and Bile is very often a Cause of this Vomiting, as the Discharges of it make appear ; for if the Bile be more volatile and oily than usual, it is liable to produce these Symptoms ; it naturally contains a good deal of alkaline Salts, which keep its Oils fluid, and if we pour any acid Spirit to it, there arises a Coagulation, and also an Effervescence ; when it therefore abounds, and the Blood is too volatile, we can't much wonder how Vomitings ensue : Bilious Constitutions are alter'd by Acids and Emeticks, which act by their oily-acid Parts concenter'd, such are all Antimonials, are changed into Catharticks, and even into Diaphoreticks,

phoreticks, or Alteratives, by fixing the Oils, and coagulating them with proper Doses of acid Salts : Sometimes indeed some few Carbuncles on the Stomach do raise this Vomiting, which are constant, and not to be reliev'd. The Fluxes that attend Fevers do argue an Acrimony of the Humours, that stimulates the Guts in such forcible Contractions, which as it is twofold, does not always depend on one sort of Acrimony ; it is more frequently occasion'd by the Acrimony of the Bile, as appears by the Colour of what is thrown down ; and as their Stools are commonly tinged with a high-colour'd Bile, we then guess at the Nature of the Acrimony to be alcalious ; but on the contrary, if the Stools be black or green, we guess an Acidity to reign in the Humours. An Anxiety has a near Affinity to Fainting, and seems to depend on the same Cause, namely, on pungent Salts fretting the Nerves, and causing Convulsions on the cardiac Branch, and this appears evidently from the Pulse, which in such a Case is eclips'd ; some heretofore have ascribed Inflations of the Guts to be the Cause of this Symptom, and others of late have believ'd the Blood's stopping at the *Tuberculum* near the Heart to be the sole Cause of it ; but certainly the Convulsion of the Nerves bears the fairest Face to produce it. I cannot disown, that I have seen such Anxieties arise from strong Vomits and Purges, and this also has been observ'd from Poisons taken down, in a more particular manner

manner from Arsenick ; but then, as nothing moves in so violent a Manner, that does not disturb the Animal Spirits, or twitch the Nerves at the same Time, I cannot wonder how this Symptom should arise in such Cases ; we always observe the Mind to be greatly disturb'd with Fears and Apprehensions in the Fit of such an Anxiety, and the Spirits are the Instruments of Conveyance of Thought, as well as of Motion ; for Thought is but a Motion of the Animal Spirits, giving Ideas ; with respect to our Bodies, I mean ; therefore it is most probable, that this Anxiety depends on that Motion of the Spirits, which hurries on Convulsions, or convulsive Disorders. The Pulse is caused by a Rarefaction of the Blood in the Heart, and the Blood being driven into the Arteries, distends them, which coming to their utmost Pitch, recoil and contract ; wherefore, according to the various Rarefaction and Contraction, the Pulse varies : This Rarefaction depends on the Condition of the Blood, for if it be of a moderate Degree of Saltness, and of a proper Degree of Density, fit for Fire to enter, and not to pass freely, the Heat will rarefy it, and divide it into a larger Bulk. One of the chief Causes of the Pulse, in malignant Fevers, is taken from the Condition of the Blood, and Blood too fluid does not rarefy, because the Heat presses freely thro' it ; for as Milk, in boiling, takes up more Room than Water, so the Blood too thin lets all pass

it without swelling up ; whence, if it be too thin, it does not rarefy, nor is therefore the Heart duly inflated by such Blood, but it is injected, and does not touch the Walls of the Heart, and therefore is the Pulse small : But if, from too great a Quantity of this Venom or Poison, the Blood be so fluid and attenuated, that it won't rarefy, the Pulse, becomes not only weak, but, at last, fails quite. I believe somewhat like this happens, when People, otherwise sound, have taken Poison and die suddenly : from a corrupted Blood, the animal Spirits are not at all laudable nor proper for muscular Contractions or Motion, and therefore the Heart cannot be contracted by such Spirits, and the Pulse depending on the Heart, is mov'd as that is ; as this then is weakly mov'd, so is that : But if it be more acrimonious than usual, the Heart will be easily twing'd, and the Pulse becomes frequent. The Inequality depends upon the unequal Mixture of the Blood, some Part of which is thin, and rarefied, another Parcel is gross and thick ; hence may it happen, that a Physician will be cheated, if he relies on the Pulse, in malignant Fevers ; because, whilst he is feeling it, it may be regular, but may afterwards be weak ; however, he is made perfect Judge by often feeling and knowing its Varieties. A Palpitation, a convulsive Motion of the Heart, which is irritated by the acrimonious Humours of the Blood ; sometimes this is done by a Flatulency

lency in the Spirits that run to the Heart irregularly, and inflate the Nerves, and so occasion Convulsions; this Case has been seen in the Ventricles themselves, which have been so inflated, as to exceed even an Ox's in Bigness, by Wind only. From the Blood itself is the Urine separated from the Kidneys, which as in sound People it varies from itself, so it is not to be wondered, that in malignant Cases it should also vary; in such Fevers it is sometimes thin, at other Times thick, and often smells very strongly: Its Constitution depends on the Change that is made of the Blood in the Heart and Lungs, for whilst the Poison in the Humours is mix'd in a confus'd manner with them, the Urine will be thin, or of a thick Consistence, as this Mixture is, from whence it is separated; and where it is thin, it appears that the grosser Parts are retained within, and we always observe, that People in Fevers are worst, if no other Cause concur, whilst their Water is thinnest; for then they turn into Ravings, Convulsions, and other Disorders, as Comas or Lethargies.— The Nature of Sweat is explain'd by its manifest Causes, many of which have their Effects, inasmuch as the Blood being more rarefied by a gentle Effervescence; hence is the Pulse greater in the Beginning of a Sweat, it coheres so loosely, as that the saline and aqueous Parts, by a gentle Heat, pass thro' the Pores of the Body: In a malignant Fever no Sweat at all will
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issue forth, either naturally or by Art; and this is a very bad Sign, as Nurses themselves know, for it denotes an Acrimony of the Poisson, and a Driness in the Blood; Sweat is never natural, Perspiration is; from whence it appears, that when Sweats issue, the Blood's Texture becomes looser and less cohesive; for as in a natural State Sweat never happens, altho' the Blood be loose enough to let Secretions pass from it, yet the Blood never parts with any thing from it by the Pores, but Steams and Vapours, and perspirable Matter: From Chymistry it appears, that the Union of Salts and Acids are the closer, when they are the purest; for if an Effervescence happens in our Juices, from alkaline and acid Salts, and there are no trifling Reasons to believe so, the purer these Salts are contained within us, the stricter are they united together, and no Effervescence will at last happen, nor therefore any Secretion of Sweat: Those Salts that raise a Commotion in the Juices, are the greatest Promoters of Sweat; namely, the Volatile Oils and Salts, if they be discreetly blended together with watry Vehicles; hence, is it evident, why they who are seiz'd by Frights with malignant Fevers, do very seldom escape; for as in any anxious and wild Amazement, the Nerves are shrivell'd up, and the Blood stops, and breeds an Acidity by its Stagnation, this factitious Acid join'd to that in the Blood causes a large Proportion of noxious Acid, the
Salts

Salts are so united as never more to be separated; and therefore no Sweat issues from such Bloods: A gentle or plentiful Sweat gives us hopes; sometimes also a foetid Sweat breaks forth, by Reason of a Corruption in the Blood, and an Expulsion of putrid Steams, such as use to proceed from Volatile Salts: The too great Fluidity of the Blood is also to be consider'd; which being drawn off indiscreetly, remains fluid and never does congeal into a Cake. Good Blood contains various Parts, to wit, acid, saline, earthy, spirituous, oleous, and watry; which are so mix'd with one another by effervescing, and their intestine Motion, as to appear to constitute a homogeneous Mass, endow'd with a gentle Consistence, as is observ'd in Milk: This being discharged by Bleeding, and left to it self, does, of its own Accord, divide into two Parts, a thicker and thinner, known by the Names of the *Cake* and *Serum*; which uses to happen sooner, if any Acid be added to it: The Cause of this Caking is not only the Cessation of the intestine Motion of the Particles, which occasions an Attraction of the Caky Parts to each other; but the Acid of the Blood being blended with Volatile Salts, and they flying off, the Acids act, which are assisted in this Work by the Air; hence external Heat; inasmuch as it contributes to exhale the Volatile Parts, promotes this Caking. The coagulating Force of the Blood depends upon an Acid contained in it, of which, I am persuaded,

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persuaded, from the Blood of sick People, being apt to coagulate, where an Acid reigns; for if you syringe into the Blood of any Animal acid Spirits, such as Spirit of Vitriol, of Nitre, or Vinegar diluted with Water, you will find the Creature to breathe short, so fall into Convulsions, and to die; and upon Dissection, you find their Blood strongly coagulated; on the other Hand nothing prevents Coagulation better than Volatile Salts, which do attenuate the Blood, and even dissolve it after Coagulation: The Truth of which will appear, if in Place of an Acid, you inject Volatile Spirits of Salt Armoniack, Urine, or Hartshorn, for then you will observe the Blood so loose in its Consistence as not to cohere; so that if the Blood be found too fluid in malignant Distempers, 'tis a strong Presumption, that their Blood is too saline: If therefore the Blood be more fluid than usual, what wonder, if it erodes the smaller Vessels, and flows forth very plentifully by Passages often open'd thereby, as the Nose, the Belly, the Ears, the Womb, and the like. Having explain'd how our natural Functions are prejudic'd, we shall proceed to those of the Animal, and first, a Sense of a burning Heat in the Region of the Loins and the Bowels: All Heat is raised in us by an Effervescence, and the Heart and Guts being two Places where our Humours have an intestine Motion, from the Pressure of the former, and a Concurrence of the

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the Choler, and Pancreatick in the latter : This from the Bile is greater or less, as the Bile is more or less stock'd with fierce Salts, and that from the Pressure of the Heart answers to the Particles contained in the Mass of Blood, capable of Heat by their Attrition ; this Pain and Burning perceiv'd in the Region of the Back, is an Effect of the Effervescence in the Intestines ; for Volatile Salts that are nearly caustick, do produce very sensible Effects upon membranous Parts, acting like Poisons, and vellicating strongly : The concurring Symptoms do denote this Acrimony, for a Heart-burning, and an Anxiety do attend such a Heat ; and the Salts extricated from the Compression of the Heart, produce internal Heats and Anxieties, and Difficulties of Respiration ; for if the Blood be too volatile and saline, it is rarefied, and its Moles is larger, and consequently fills up the Vessels and straitens them, and then the Breath must necessarily be short : If a notable Fever attends Malignancy, these Fevers are discover'd by the Pulse ; and if the Fever depends upon a saline Acrimony, the Heat must be great ; but if an Acidity, the Fever is mild and slow, generally speaking, for if it be exceedingly malignant from either Disposition of Humours, it follows, that these Fevers will soon run their Course, because, if the Blood be totally dissolv'd, or totally coagulated, it will either all run out of the Vessels, or be so congeal'd, as to stand still in the Vessels ;

Vessels; and either way the Struggle will soon be finished: It therefore behoves a Physician to know exactly the previous Constitution of the Blood. The Steams which arise from the internal Parts to the Head, to which there are large Passages, do produce intolerable Pains, because many Vessels creep up to the Head, and into the Membranes; hence is it known why Ravings happen so frequently, and if they are carry'd to other Parts of the Body, they occasion troublesome Symptoms, in that Place especially where the Blood passes from the Arteries into the Veins, by reason of a Narrowness of the Passage; hence Frights in Sleep, various Agitations of the Body, and Pains, are very usual; and if they attack the System of the Nerves that are subservient to Motion, Tremblings and convulsive Motions rear their Heads. Concerning Sleep and Watching, which seem so contrary to each other, there is a greater Difficulty; for many that are seiz'd with a malignant Fever, are observ'd to watch perpetually, as well by reason of serious Thoughts, and Anxieties of Mind, for their approaching Death, as of violent and torturing Pains. But, on the other Hand, you see many taken lethargick, the Reason of which must be drawn from the Nature of Opiates, Emulsions, and the like. We know by the Taste, that Opium is bitter, fatty and foetid, which Qualities taken away, the Virtue of Opium is lost; for if it be roasted upon the Fire a little, it becomes unfit to produce Sleep,

Sleep, but if it be gently roasted, it becomes stronger. It seems natural then to conclude, that somewhat flies off by the Force of the Fire ; by an immoderate Heat this Virtue is lost and perishes, but by a moderate one it is exalted. I persuade my self, that this is an oily, volatile Salt, because in the Fat of Animals, which corresponds to the Sulphur in Metals, and to the Oil of Plants, this Salt is found to abound ; so that the Energy of Opium may reasonably be suppos'd to be plac'd in an oily, volatile Salt. Also in Fat or Oil does consist the Virtue of Emulsions prepar'd from Seeds, in which we discover much of this Salt ; moreover, Spirit of Wine is found to fuddle the sooner the more oily it is, and Chymists know how to separate the Oil ; wherefore volatile Salts introduce a Drowsiness, inasmuch as they rarefy the Blood, and the Vessels are compress'd by that Rarefaction ; hence sleepy People are generally giddy, and even Sleep it self is produc'd where the Humours are volatile and oily, as in bilious People, the Blood is moveable, and yet coheres : Hence is it that we often observe Patients drowsy and sleepy in burning Fevers, and volatile, oily Salts, taken in a plentiful Manner, dispose to rest. Under the exterior Signs of a very malignant Fever are reckon'd Buboës, which are either malignant, or benign and kindly, Buboës arise as often as the vitious Blood stands still in the Glands of the Groin ; and I conclude, that this is the Case,
because

because I have seen the Glands of the Plexus Choroeides after Death, and upon Dissection turgid with viscid or other Humours next, because any Bubo that is not fix'd may be discuss'd or dissipated, which could not be if the Blood were extravasated; but the original and prime Cause of such an Inflammation must be sought for in Cold, which, as in a Catarrh, straightens the Part affected, and so hinders the Circulation of the Fluids into, or through that particular Part; and thus do the Vulgar, not improperly, blame Cold for many uncommon Events, which sometimes only straightens the Vessels, as I have now mention'd, and at other times even fixes a Stimulous or sharp Points into the Fibres; so that when we hear the Patients complain, that they have got Cold in such a Part, they must be understood in one of these Senses, that is, that the Part where they got Cold is either straighten'd or stimulated, both which Cases are attended with dismal Consequences. If the Blood so stagnates as to be impassable, it breeds an Impostume, which happens from the Blood and Glands being at one and the same time in Fault; the first by its Grossness and intestine Motion, and the latter by its Straightness. This intestine Motion is rais'd from hence, that inasmuch as by the close Friction the Parts which are united are separated, they begin to heat and swell, and turn at last into Matter. The Pain is a necessary Concomitant of Suppuration, because the Salts are extricated, and they

they stimulate the Fibres into lively and troublesome Contractions, which therefore must be milder or stronger, as the Salts are stronger or weaker, and therefore does the Inflammation, as it partakes of Salts, become either mild or fierce; so that either the Inflammation approaches to a true Inflammation, or to an Erysipelas, where the Humours are very acrimonious. Wherefore the volatile and acrimonious Salt swimming in the Lymph enters into the Glands, pierces them, and occasions Irritations, Pains, Swellings, Inflammations, and at last Impostumations. If this Humour chances, by the Help of Medicines, or by an Effect of the Spirits, to be thrown out through the Pores, or chances only to be changed or blunted, we see very often that Buboes are prevented: But the Reason why the conglobate Glands are more affected than the conglomerate seems to be, that the latter are of a Texture fitter to admit of such Humours than the former, inasmuch as they are, perhaps, straighter, and don't so readily transmit those Humours as the former, which are accustom'd to pass Humours frequently through them; and, for this Reason, perhaps, it is, that we oftner see the conglobate Glands than the conglomerate; hence in the Neck, Arm-pits, Groin, and elsewhere, we meet with Kernels very frequently, and therefore also in malignant Fevers. Carbuncles, of what Colour soever they be, do at last turn black, and therefore they are

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call'd *Coals*, unless they be cur'd. In their Beginning they twinge greatly, and do gnaw with so burning a Heat, that by reason of their Acrimony they consume and mortify the Part on which they seize first, as well as the neighbouring ones; and besides a saline, or an acid Acrimony, no one has ever attempted to shew a third; but each has its characteristick Marks, namely, an acid Acrimony discovers it self by a white Eschar in Ulcers rais'd from it, and an Alcaline one mortifies the Part with a black Eschar: An Acid corrodes without much Heat, but the Alcaline burns, and raises a violent Heat and Agitation. This is evident from potential Cauteries, which being apply'd to the Parts, do burn and corrode, and occasion a Blackness; and the same happens to fix'd Salts that are caustick, as to volatile ones, for there is only a relative Difference between these two: Deservedly therefore do we ascribe Carbuncles to volatile Salts corroding the Parts, and applying Butter of Antimony still confirms us more in this Affair, which containing an Acid in it hinders the creeping, as Surgeons do well know. Lastly, Spots do remain to be accounted for by us: They arise from the same Humours that corrupt the Skin, and produce some Degrees of Mortification; they are very subtile Humours, because they can pass off by the Skin, and because they often break forth two or three Days after Death, which shews they proceed from Putrefaction, and the utmost Heighth of intestine Motion,

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the Salts that cause this Blite may be of different Stamps, for the acid ones coagulate the Blood, and arrest small Particles of it coagulated at the Skin, and the acrimonious ones exhale the Fluids, and reduce the Blood to a Consistence proper to stick in the small Vessels. There must be an Acrimony join'd, or it could never happen that Physicians have found upon feeling the Pulses in malignant Cases, it has given them Spots; the Sweat therefore conveys this Humour outwards, and gives or communicates it to others: I think it may, with Justice, be agreed to, that some Acrimony gives Beginning to malignant or pestilential Fevers. In order to confirm these Sentiments, I shall take a View of the manifest Causes of them. It is not improbable to allow, that this Matter of the Poison is strictly united to the Blood, and that it is let loose by such Means as we experience in chymical Analyses, namely, as by Fermentation we find, that Spirits and Acids are separated by the Help of Water and Heat, and some other Additions, so we can't expect any Spirit, or volatile Salt, either from Stum or Urine, without Fermentation; which yet, when fermented, do readily yield both; or by an Addition of another Salt, as in Salt Armoniack, whose volatile Salt is so strictly united to its acid Salt, that the whole Salt will mount with a strong Fire intirely; but by adding a little fix'd Salt, with which the acid is more attracted than by the volatile, the volatile Salt mounts of it self: Hence, perhaps, a

Reason may be assign'd why lixivial and fix'd Salts, as of Wormwood and the like, are successfully made Use of in malignant Cases from an Acidity : But the first Manner, as being more natural, is to be consider'd at present. Among the manifest Causes of malignant and pestilential Fevers, Physicians have observ'd and reckon'd, first the Air tainted with fetid Steams arising from the Earth, the stagnant Waters and other corrupted Bodies. Next Victuals that are corrupted, and have contracted a Mustiness ; and hence Famine is always reputed as one chief Cause. The Bodies of Men unbury'd do contract a Fœtor, by which a strong and rank volatile Salt arises, which is sooner done in warmer Climes and southern Winds, than in the North : hence Wars do often breed even pestilential Fevers ; hence are these Fevers sooner bred in Summer than Winter, whose Cold proceeding from Nitre, checks them almost in an Instant ; and *Diemerbroeck* observ'd somewhat like this in his Discourse on the Plague, namely, that in Winter it decreas'd : But by what particular Accidents a caustick Salt should reign in the Air, I don't pretend to explain ; however, it must be taken Notice, that all Acrimony is increas'd by the Fire, so that Salt of Tartar, when temper'd with Spirit of Wine, and by Distillation becomes volatile, becomes more acrimonious ; so that, I think, it may justly be concluded, that Putrefaction is the Parent of malignant Fevers ; and what convinces

convinces me of this, is, that the Air communicates its Venom by bare Contact, and that whole Regions are infected at once. Some later Philosophers, as *Du Hamel*, and others after him, have reputed the vast Heats to be the Occasion of epidemical Diseases ; so that the Nitre of the Air is suppos'd to be turn'd into a *Mephitis*, and therefore render'd useless, or rather dangerous, for Inspiration ; that is, that its Spirit is made pure and caustick, and the earthy Parts are cast down into the Earth, so that we breathe in nothing but Spirit of Nitre ; and, to confirm this, they bring an Instance of Rain in *Africa*, which is known to corrode the Skin and their Cloaths, which plainly prove this caustick Salt to be an Acid. Hence all these Things being duly weigh'd, if we design to avoid malignant and epidemical Fevers, we must either study to amend the Fault of the Air by external Steams, that is, by a frequent Exhalation of alcalious Salts, if the Air be found too acid, or of acid ones, if alkaline ; we must dilute much, and obtund in either Case, our Diet should consist of mealy, mucilaginous Victuals and Drinks, such as Rice, Wheat, Beets boil'd, Oil, Milks, and the like, we should manage moderately as to Exercise, Sleep, Passions, and our Secretions, to incline towards a free Perspiration, to make Nature answer once a Day, and to live chearfully. Thus far may we prevent or cure malignant Fevers by the six Non-naturals, wherefore when such malignant Fevers reign, and

you are apprehensive that you may be seiz'd, we commonly advise gently-four Things, such as Apples and Fruit, moderately to be taken, that the Blood may not rise into Effervescences. Elixir Proprietatis, with an Acid correcting sharp and hot Choler, is us'd with Success; Vinegar, taken to the Quantity of a Spoonful every Morning, has been found of very great Use; and they, who cannot bear Vinegar, may take Rhenish Wine, and Spirits sweetned with Spirit of Wine, as also Barberries and Currants in Jellies: As for those Acids mix'd up with Strong Waters, they are not convenient, because the Strength of them has been known to make People rave. Thus have I said all I think of use for the Kitchen Physick, as well as physical Management of malignant Fevers, and their Prevention.

47 *Palsies* shall be discuss'd in the next Place. I shall first consider what they are; then, what are their Causes and Differences, how they are known, and how to prevent any of them, as far as can be done by Home Management. A Palsy is commonly describ'd to be, a Loss of Motion, or Sense, or of both, in the whole Body, as in an Apoplexy; or in some Parts, arising from an Obstruction, Compression, or Cutting of the Nerves; this Description explains the Nature of the Disease: But that I may more clearly look into this Disease, I will take a View of what is requir'd to the animal and voluntary Motion of the Body. To Motion, therefore, both animal and voluntary,
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the following Things are requir'd : First, the Will must concur ; then, the Brain must be rightly dispos'd ; next, the animal Spirits must be in a due Condition, as to their Quantity and Quality ; then, the Nerves must be open, that the Spirits being determin'd to move, may freely enter their small Channels : The Muscles also must be rightly dispos'd to receive the Influences of the Spirits, and be inflated and distended, or alter'd by them ; for the muscular Fibres are so many Siphons or hollow Pipes, which, being inflated, are some-way chang'd in their Figure, and made shorter ; which would make one readily believe that they gain in Breadth what they lose in Length, and that the Tendon is brought nearer to the Head of the Muscle ; lastly, there is occasion for moveable Bones, for their Articulation, without which no Motion could be perform'd. Animal Motion, therefore, has for its efficient Cause animal Spirits so dispos'd as I have now describ'd, which are brought by the Nerves, and inflate those muscular Pipes and Fibres ; but the instrumental Cause are the Muscles and their Tendons : For when the Muscles are shorten'd in Length, it is necessary for the Bones also to be mov'd, to which the Tendons are annex'd, and into which they are inserted ; and thus is the Member mov'd which that Bone serves. This Motion, therefore, is not unlike, nor is it mov'd and produc'd in unlike manner to that Machine by which we fix Piles of Wood into

the Ground: For as this is moved by a great Rope tied to it, and the greater Rope is pulled by smaller to let it down; so is the Bone by Ropes tied to it, to wit, the Muscles and Tendons are fixed in like manner to the Bone, and draw it after them. Having premised thus much concerning Motion according to Nature, let us now see how Nature is vitiated, and how she fails in acting. Animal Motion is prejudiced remotely from the Will, when it does not determine or detach animal Spirits to move the Part, and therefore do they not flow into the Channels of the Nerves nor Tendons of the Muscles; without whose Influence it is impossible for local Motion to be performed, or for the Motion of the Limbs from one side to another. But here in a Palsy it is not probable that the Will is at all affected: For although the *Will* commands any Limb to move, yet it cannot be moved, nor does it move as it ought, by reason of some Impediment in some of the Requisites. The Brain may be in fault, but remotely, and the Cause of this Motion diminished or abolished; for when the Brain is ill disposed, the animal Spirits are neither sufficiently generated, nor are those separated, pure and subtile; or so moveable, but they are unfit for Motion, and generally too viscid: All of us must acknowledge that there is a certain Degree of Purity required in animal Spirits, and that their Condition depends on the Blood's Condition: The animal Spirits are the immediate Cause of this Distemper,

per, either when they are wanting, as in Persons in their Agony, or weakened with a tedious and long Distemper, or when they are impure and unfit for Motion. They cause this Disease, when they are deficient; for as I have already said on animal Motion, it is certain that they must be both pure and good, and also in a sufficient Quantity, that they may inflate and distend the Nerves, and do their Duties in their Channels, that is, make the Muscles shorter by inflating them, and so moving them: How this is done is much disputed amongst the Gentlemen of the Faculty; and when they are deficient, the Nerves flag, and their Sides touch each other, and then there is no Circulation of Spirits; moreover, the Fibres of the Muscles, because they are not inflated by the animal Spirits, cannot be contracted into their circular Rings, and therefore no Motion is performed; when they are impure and less moveable, and oppressed, as it were, with a Stupidity, or are too viscid and gross, they obstruct the Nerves, and then all Motion must be at a stand, for want of the Power of Passing. The Nerves also may be the immediate Cause of a Palsy, when their Channels are obstructed, compressed, or straitned, or labour under any other Fault; for, as I have said, there is a Necessity for the Channels to be open, that the animal Spirits may flow from the Brain into the Nerves; and if their Passages are shut, what is to be expected, but a Diminution or Abolition

tion of Motion? or if they be cut afunder and wounded, must not Motion cease at that Instant of Time at the Place into which those Branches were inserted? because all Influence is cut off. Or when they are compressed by any Tumor arising about the Part affected, or upon the Nerve, or by any Weight or Pressure upon the external Nerves, Motion cannot but be lessened or abolished: Or when they grow together, which sometimes happens to cachectical Bodies; if that Languor, with which they are held, passes into a Palsy, the Spirits being gross or watry and impure, and, being fewer in Quantity, are rendred unfit for Motion, and the Fibres of their Muscles being lax, and incapable of Motion thereby, the Nerves grow together, and produce a Palsy: or when the Nerves grow hard and withered, and deny any Passage to the animal Spirits. An Impotence to Motion may arise by the Fault of the Muscles, when their Fibres are unfit and ill disposed for Distension, namely, when they are flaccid and soft, whereas they ought to be hard, tense, and elastick, that the animal Spirits may flow freely through the Nerves into them, and so excite Motion in them. The Bones should be well articulated, and moveable; for when they are luxated or fractured, or they grow together by an Extravasation of a certain concreted Juice, they cannot be moved; but, however, that interrupted Motion cannot be properly called a Palsy: For although Motion is indeed abolished,

lished, yet it is not by a Resolution of the Parts, which is required in a Palsy. But there are many antecedent Causes of this, which may be all those Things that introduce a Softness and Flabbiness in the Muscles, such are watry Things; or all those Things that straiten or obstruct the Channels of the Nerves and their Origins; such are Phlegm, and such like; all those that compress or dissolve the Union of the Parts, as Bruises and Wounds; all Narcoticks and Opiates, which make the animal Spirits move slowly. Neither can it be thought amiss, if, among the antecedent Causes, I recite some Diseases of the Head, after whose Attacks it very often seizes; such are an Apoplexy, and all the Tribe of sleepy Distempers, which imprint a notable Damage on the Brain; for watry, viscid and phlegmatick Humors are the Causes of the foregoing Diseases, the Relicks which they leave behind them, when they seize upon the medullar Part of the Brain, do hinder the Circulation of the Spirits, and do produce this Disease; sometimes also the Nerves, being soaked in such Humors, are relaxed, and then also this Distemper ensues. The Fault may reside in the Blood, which grows daily more vitiated, namely, in a watry or phlegmatick State of Humors, which make all the Secretions impure, thick, and unfit for Motion; and in the Brain the animal Spirits become thereby viscid and watry, and then they will stick in the Nerves or Medulla of the Brain, and there

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produce Obstructions, or render the Nerves too flabby to obey the Spirits, because then they are apt to fall together, and grow up, and so stop up all free Passage for the animal Spirits; or when by such Blood ferous Humors are heaped up in the Head, for it is common daily in a sound State for Phlegm and Water to be thrown off by the Nostrils and Mouth; which Separations, if they be suppressed, do precipitate Mankind into many and grievous Diseases in the Head by deviating into a deprav'd State of Humors. Nor ought I here to omit the Obstructions of the Vessels that re-convey the Lymph from the Brain, which whilst they labour under Obstructions, the circular Motion of the Lymph is impeded, and thus is produced a Stagnation of it, from which Stagnation there gradually arises an Extravasation of it, which Extravasation produces Epilepsies and Convulsions, if there be an Acrimony in the stagnating Lymph, or otherwise Palsies, and such like, if it be gross: Let these suffice for the antecedent and immediate Causes; let us now take a View of the external ones. These Causes are various, and are capable of producing this Disease in various Manners; amongst one of the chief may be reputed the Air, which may be too hot, or cold, or moist, or thick, or stock'd with noxious Vapours. Very hot Air gives rise to this Disease, by dissipating and consuming the more subtile and spirituous Parts, leaving those behind that are gross and unfit for Motion; and
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too cool or moist Air renders the Blood and Spirits too watry and unfit for Circulation, and by piercing the Nerves destroys their Texture in making them too rigid ; if it be choaked with extraneous Vapours of a malignant Nature, which congeal all our Liquids, and arrest their Motion, hence will arise a Drowsiness, by which the Spirits are incapacitated for Motion. Nor do our Victuals and Liquors contribute less to produce a Palsy, namely, viscid, glutinous, watry and less spirituous Food ; for such Victuals, being taken into the Stomach, are not rightly fermented, the Chyle produc'd from them will be crude and doughy, which, whilst it moves through the Lacteals and Thoracick Duct up to the Heart, does not supply a subtile and pure Blood for Spirits ; on the contrary, the Blood will be gross, earthy and impure, which being carried by the carotid and cervical Arteries up to the Brain, it cannot be that the Spirits should be of another Nature than gross or watry, and altogether unfit for actuating the Nerves so as to produce Motion : Moreover, such Victuals heap up much Serum in the whole Mass, which seldom fails of bunging up the Nerves ; Liquors have an equal Power, and Brandy-Drinkers seldom escape this, or some equivalent Disorders of the Brain. Practice informs us that Opiates, taken in any large Quantity, do produce this Disease, and in some a very small Quantity will have this Effect ; and we are not at a loss to know the Reason

334 *The Family Companion*

Reason of this Appearance: For they introduce an Inēptitude to Effervescence and Motion, which Taint, being communicated to the Spirits and Nerves, occasions a Fever of them, and such as are unfit for performing the Functions of the Brain; and, then, if there be any Acrimony in the Juices, that tears the tender Fibrils of the Nerves, and, in proportion to such a Damage, they are rendred more or less incapable of moving the Muscles, for whose Use they are principally designed; and then a Palsy must ensue of Course. Sleep and Watching, exceeding their just Limits assign'd by Nature for that Vicissitude, or if the Places we sleep and watch in should be unwholsome, namely, moist, or cold, or if we perform Journeys in the Night-time, a Palsy may be endanger'd thereby; for watry and viscous Humours are encreased and heaped up in the Body, the Motion of the Blood is retarded, the Generation of Spirits is impeded and depraved, the Juices are rendred vapid and spiritless, and unfit for Effervescence by too much Sleep: So that Sleep has a just Title to be ranked amongst the external Causes of Palsies. Into this Rank also may be put, a lazy, inactive and sedentary Life: And excessive Watchfulness may be put into the Number of Causes, inasmuch as the Spirits are consumed by it, and more fly off than are bred or separated, so that Motion must be impaired; for there is a sufficient Quantity of Spirits, and a good Disposition, that is, Agility,

lity, required for Motion: In this last Supposition there is neither; therefore Motion will be impaired in Proportion. Sudden and grievous Passions do often on a sudden hurry on a Palsy. Do we not frequently see Men struck dead with Terror? What Reason can be given for this Phænomenon? I can think of no other, than that the Blood is impeded in its Motion, and the Influence of the animal Spirits is taken off, so that neither Muscles or Nerves do their wonted Functions, but are totally deprived of the Necessaries for Motion; the Blood cannot move freely every where therefore, because the Parts are contracted, or made rigid, so that an Interception of the Motion must necessarily ensue, till the Terror ceasing, and the Nerves becoming again flexible, by what means I have no Time to enquire, the Machine works in its usual Manner. Some also have fallen into this Disease from Sadness and Grief; and thus both the intestine and circular Motion have faded; for this is only a smaller Degree of the former, and acts gradually and insensibly as it does, by shrivelling the Nerves, and rendring them unfit for Motion. The Secretions, too much encreased or suppressed, have their share in producing this Distemper: Those which are of use to our Strength, being wasted and carried off, do exhaust us, and bring on an Inability; and hence a *Tabes Dorsalis* happens, from too excessive an Expence of the seminal Liquor: But this Sort of Palsy may
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336 *The Family Companion*

more properly be called an Incapacity to Motion, than a Palsy. Some, whether general or particular, being suppressed, do also occasion it; the general Ones are the Suppression of the Excrements, of Urine, of Sweat, the Piles, and the Menstrual Flux; and the particular Ones are from the Head, and such like, which, being diminished, do deprave the Juices and Nerves, and render them too lax, and at last introduce a Palsy: To which Causes we may add Blows, Falls, or Contusions on the Head or Back; for these compress the Nerves, and hinder the Efflux of animal Spirits into the Muscles. Thus have we descended to most of the Causes of a Palsy; now let us look into the different Sorts of Palsies: There is a Palsy, in which all the Parts below the Head are affected, which Physicians call *Paraplegia*, or in which all the *Phalanges*, from the Loins to the Fingers Ends, are touched, which obtains the same Name also; there is another, called an *Hemiplegia*, which only seizes one Side; there is another, which we call *Particular*, that takes an Arm, a Leg, or some one Member's Use away; another is called a *Solitary Palsy*, when there is no other Disorder attending beside the Palsy; another is *Compound*, when some violent Pain, such as Colicks, and the like, have preceded; that is called *Secondary*, which succeeds other Diseases; another is called *Primary*, which invades first: Sometimes Motion is lost, but the Sense of the Part is retained;

tained; at other times the Sense is lost, but the Motion is preserved; which last a certain noted Physician took notice of to me, as a wonderful Case: But his Surprise ought to have lessened, if he had considered, that it is more wonderful to lose Motion and retain the Sense of a Part, than to lose Sensation and retain Motion; for Motion depending on a large Quantity of animal Spirits rushing into the Nerves, as well as Nerves truly and justly elastick, and Sensation is performed by a gentle Vibration of the Nerves, as well as a moderate Influx of animal Spirits; it is not so much to be wondred at, that such a Quantity of Spirits, and such a Condition of the Nerves as will support Sensation, should not raise them into Motion: Nor is it indeed at all wonderful, that the Nerves, which are deprived of a sufficient Quantity of Spirits for Motion, should yet entertain an Intercourse sufficient for Sensation; the Case therefore was not at all new. As to the Causes of these Differences of Palsies, I shall give a short Account of them: A Paraplegia may be deduced from a Compression or Obstruction of either side of the *Medulla oblongata*, or spinal Marrow, or from the same Obstruction whose Cause is lodged in one side of the Brain at the Origin of the proper Nerves: But when all the Parts from the Loins to the extreme Joints of the Toes are seized with a Palsy, it necessarily follows, that such a Palsy arises from an Obstruction, a Compression, an Induration or

338 *The Family Companion*

a Solution of Unity of the spinal Marrow, at the Region of the Loins, so that the animal Spirits cannot be dispatched to the inferior Nerves. But an Hemiplegia, or Half-Palsy, arises from an Obstruction of either Part of the spinal Marrow, either from a Strock, or a Tumor that compresses, or from extravasated Humours, or from some such Cause, that hinders the Distribution of the Spirits. A Particular Palsy arises from an Obstruction, Compression, or growing together of the Nerves tending to that Part; so that to cure such a Palsy, it is necessary to be skilled in Anatomy of the Nerves; because by such a Knowledge we are directed to the Seat of the Disease, without which Knowledge nothing great can be done in Physick. The Solitary Palsy arises from a Fault in the Nerves, Spirits, or Muscles. The Compound Palsy, which ensues upon Colicks, is occasioned in the following Manner: The Part, first affected, is very membranous, and therefore very sensible, if irritated by an Acrimony lodging upon the Intestines; then it communicates itself to the Blood and Spirits, and there raises convulsive Pains, and, at last, produces a Palsy, or, rather, an Inability to Motion: For this Incapacity is not properly called a Palsy; because it seizes the Joints with Pain so exquisite, that the Patients, out of Fear, dare not change the Posture of the Part. That Motion should be destroyed, and the Sense of the Part should still remain, or that the Sense of the Part should

should be lost; and the Motion continue, is not strange, and, as I have already hinted, proceeds from various Causes; for, as the Cause is more or less fixed, the one, or the other, will be preserved, or lost: If, then, the Fibrils of the Nerves be obstructed, Motion persists, and the Sense is lost, by reason of the Perviousness of the Spirits to the Muscles, but not to the Skin; but if, on the contrary, the Spirits are obstructed in their Passage to the Muscles, and free in their Way to the Skin, then Sensation continues, though Motion be lost. In a Sleeping of a Limb, as we call it, where the Motion remains, but the Sense of the Part is diminished, and sometimes depraved, for there is a sort of a pricking Pain, as if Needles prick'd the Part, and this is caused whilst the Spirits come into the Part after the Compression of the Nerve; it cannot, I say, but happen that the Fibres are again filled, which were compressed, and, as it were, agglutinated, and are again stretched and distracted, and so raise an Idea in our Mind, to which if we add, that Sensation is an Impression brought to the common Sensory by the Help of the Nerves, and Motion is a laborious and difficult Action, to which there is requisite a lively Expansion of the Spirits, not only in the motive Organs, but also about the Parts where is the Principle of Motion and its Impulse; hence will readily appear, why Motion remains when Sensation is lost, and on the contrary. Hence I conclude, that Motion and Sense are injured,

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because the nervous Filaments are either softened or hardened, or are wounded, when not only the Spirits cannot be moved by the Nerves, but neither is there any *Tremor* communicated from the extreme Parts to the Brain, for the exciting Sensation. Moreover, for the Reason alledged, both the Heat of the Parts, and Nutrition, are diminished, or abolished; nor can it be any Wonder, because the Nerves being under these Circumstances, all the muscular Fibres fall together, the Arteries are compressed, so that the Blood cannot circulate freely, neither can Heat therefore, or Nourishment, go forward, because these two are necessary Consequences of the Circulation of the Juices.

But that Palsy, which has no other Disease in Company with it, we have deduced from a Fault in the Nerves, Muscles and Spirits; for these being rightly disposed, Motion will inevitably follow at the Will's Command. We might add to these, that some heterogeneous Parts are often lodged in the Blood, and are communicated to the Brain and Nerves, by which it is produced: But a Palsy, which succeeds another Disease, such as slow Fevers, an Atrophy, and a long Confinement to Bed thereby, and the like, has already been explained. As to the Signs of a Palsy, before I begin to explain them, it may not be improper to answer a Question, namely, how a Palsy of one Muscle occasions a Convulsion of its Opposite, or Antagonist: To answer which

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Difficulty, it is known, where, from the same River, two Streams arise, the one being obstructed in its Course, the Water runs with great Violence through that which is yet free and open, and the other is quite deprived of Fluid : So also may it be conceived here, because the animal Spirits cannot flow through both Muscles ; the one being obstructed, it necessarily follows that the other Vessels will swell, and grow big with Spirits or Humours, and therefore whilst one Nerve is deprived, its Opposite is filled with Spirits, and so are the Muscles, which act thereby. Although the Signs of a Palsy are already described, yet I shall recite most of the Symptoms remaining. The Paralytick Part is often very cold ; in Process of Time it pines away ; there is at last neither Motion nor Sense left ; it is soft and heavy ; its natural Colour is changed ; neither does any thing give help to it, when it is thoroughly confirmed. The Signs of a Palsy, before it seizes, are the Tribe of sleepy Diseases ; for some time before the Disease begins, the Patients are drowsy ; long Fevers have preceded, and wasted their Spirits, and caused their Nerves to grow together. 'Tis true, they are very often seized without any previous Signs ; but frequently also it seizes by Piece-meal, where first they lose one Member, then another : Very often too Headaches, Giddinesses, and Dimness of Sight, precede ; as also a Trembling of the Joints, and an universal Laziness ; and where frequent Debauches

of Liquor have preceded, or where they have lived upon a viscid and gross Diet, or where some remarkable Discharges have been suppressed, or where there is a natural Laxity of the Vessels, and a severe Winter or great Rains have preceded, all these dispose to this Disease: As to the precise Knowledge of the Nerve affected, that must be referred to the Skilful in Anatomy; which, therefore, every Physician ought to be well versed in, for the sake of his Patients. In general, if the Parts of the Face be affected or seized with a Palsy, then the Seat of that Disease is in the Brain; but if any Part is seized below the Head, then the Seat is in the spinal Marrow: If any Part towards the Middle of the Body be affected, one Side becomes paralytick only; if the Legs are affected, the Nerves about the Os Sacrum are the Seat of it; if the Arms or Sides above the Diaphragm be seized, then the Seat is in the spinal Marrow above that Place: And thus we are informed of a necessary Requisite for the Cure of a Palsy; for all Authorities agree in ascertaining, that Remedies must be applied to the Seat of the Disease. The Parts, therefore, first affected, must be found out, by enquiring whether any thing happened from evident and external Causes, namely, whether they received any Blows, Wounds, Contusions, or whether any Pressure was laid upon their Bodies; whether from the Air, Rain, or Snow, the Blood has been chilled; whether they have suffered any thing from taking long

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Journeys by Night : For from these Causes, or the like, we are made Masters of the Part affected. But if no evident or external Cause has gone before, we must diligently observe in what Parts the animal Functions are abolished ; moreover, the Seat and Place of the Disease are known from those Things that do us good or harm : For, if the Prejudice be in or near the paralytick Part, then the Remedies applied will have a good Effect ; otherwise, not. All the World knows, that a Palsy is a dangerous Distemper ; but more such, if it proceed from an inward Cause ; and more especially if this Cause be a draining one, because such a Cause introduces a Dryness and a Growing together of the Nerve ; and then generally succeeds a Pining away of the Limb, as the last Consequence of its being confirmed and steadily fixed. If the Nerve be cut asunder, no further Motion can be expected : Where it succeeds a greater Disease, as the former, on which it depends, will receive no Advantage from Physick, so its Companion, of which it is a Part, receives none neither : In like manner, as one Requisite to Motion is taken away by the Nerve being cut, so is another, when there are no Spirits left ; and this is the Case of advanced Age, where the Spirits are no longer supplied. A Flux, succeeding a Palsy, and lessening its Cause, shews us that Physick is a very proper Remedy, where abundance of Crudities prevails : And as a Fever, coming upon a Palsy, has been known

of use, and has lessened the Palsy, or quite taken it off, this also informs us, that Remedies, which put the Blood into a Hurry, and encrease its intestine, as well as circular, Motion, are convenient for Paralyticks; and, in fact, Palsies are not cured, but by such Remedies as attenuate Juices in the minutest Recesses of the Nerves: In like manner, a Trembling, coming upon a Palsy, has much the same Effect as a Fever; because the Nerves begin to recover that Vibration which is natural to them, and which the Palsy had destroyed: For the same Reason, if Heat succeeds Coldness of the Parts, we may readily conclude, that the Juices, which were before under a State of Stagnation, are now again put into a proper Motion, and into a promising State. Having said so much on this Disease, it is high Time to descend to those Particulars which relate to its Kitchen-Management. Whoever do not observe and follow an exact Regimen in Diet, it is impossible for them ever to recover, though under the nicest Care: Let, therefore, their Diet be inclining towards Heat; let it be such as will incide viscid and gross Humours gently, such as will dissolve the Blood, and set it in Motion again; let them use no Victuals, but such as are easy of Digestion, and seasoned with those Plants and Drugs as are reckoned and esteemed good against the Palsy, such are Betony, Marjoram, Rosemary, Thyme, Cloves, Nutmegs, and such like: Let their Liquor be sparing; but let

let it be well stock'd with the aforeſaid Herbs. The Air they breathe ſhould be warm and pure; and if their native Soil affords not ſuch, let it be made ſo, or let them be removed into a warmer Climate. Watching, being a ſort of Motion of the animal Spirits, ought more to be encouraged, than immoderate Sleep, which helps to calm them, and encourages them yet more to ſtand ſtill: The Paſſions of Joy ought to be adviſed; for Apprehenſions do but more cloſely confine the Spirits, and make them ſtagnate. The Secretions ought to go forward, according to Nature; a Stool once or twice a Day: And ſo of the reſt.

A *Consumption* is one of the moſt frequent Diſeaſes that infeſts Mankind; and more eſpecially in this our Nation: And what is more frequent than the Scurvy, ill Habit of Body, and the like? What is more dangerous than a Dropſy, or a Consumption? The Word, in our own Language, denotes its ultimate Effects; for no one dies of a Consumption, till they are waſted away nearly to a Skeleton: Whether this is effected by Spitting; becauſe the Conſumptive ſpit up great Quantity of Matter and Blood; or by Sweatings, or Fluxes, or by any other extraordinary Diſcharges, it is variouſly circumſtanced, according to the various Cauſes: For, in a wider Senſe, any Waſting is called a Consumption; but, in a more ſtrict Acceptation, we mean that Waſting, which attends an Ulcer of the Lungs; and

and thus all internal Ulcers, waſting the Body, acquire the Denomination of Conſumptions ; ſo an Hepatick Conſumption is when, from an Ulcer of the Liver, the Body is conſumed ; or a Nephritick one, when an Ulcer of the Kidneys conſumes us : But in this Place I ſpeak of a Waſting, happening from a Conſumption of the Lungs ; which is therefore defin'd to be, an Ulcer of the Lungs ariſing from a ſharp and acrimonious Matter, introducing a ſlow Fever, a Cough, a Difficulty of Reſpiration, and a Waſting of the Body. The Parts, firſt affected, are the Lungs, and all the adjacent Parts ; the Blood, and all the Humours of the Body, whether original or ſecreted, are alſo greatly vitiated : For without ſome previous Fault in the Formation of the Lungs, the Juices are always firſt affected ; and, in the preſent Caſe, with an exceſſive Acrimony, and at the ſame time a Groſſneſs, which lay the Foundations for an Inflammation, and then an Ulcer : For Humours, that are rendred groſs, are apt to ſtick at any Obſtacle ; and if the Circulation be ever ſo little retarded, the Acrimony exerts its ſtimulating Force, and this hurries the whole Bent of the Juices to the Part ſo fretted ; the Part therefore ſwells and inflames, and an Ulcer is a neceſſary Conſequence of all this Miſchief unhealed. This ſhort Account gives a great Light into what Methods would prevent the Increate of a Conſumption : But that Part, being foreign to my Deſign, I ſhall here ſuperſede it, and pro-

proceed to the Differences of Consumptions : A Consumption, then, is either hereditary or accidental ; it is either contagious, or not ; or it proceeds from other preceding Diseases, such are Inflammations of the Lungs, Pleurifies, Coughs, Small-Pox, and many such Distempers, which I need not here expatiate upon : It is either fresh, or confirmed, according to the Time of its Duration ; others are slow, others quick ; so that we see some lead a consumptive Life for Half an Age, whereas others are seized, and dead, in six Weeks Time. The Signs of a beginning Consumption are, a slow Defluxion, a dry Cough, or if they spit upon any thing at all it is thin and saltish ; moreover, there is a Disposition, which we may call a consumptive Habit, such is a strait Breast, winged Shoulders, and a long Neck. And very often consumptive Parents do beget consumptive Children : For if a Person that has a Leprosy, or the Stone, or the Gout, begets Children disposed to these Diseases, or if all other fixed Diseases do make the Children subject to the same, which in a peculiar Manner appears in mad Parents, whose Children suffer for their Diseases, we may readily allow consumptive Parents to generate consumptive Children. It is no easy Matter to explain how this Communication is propagated : But if, as the Poet sings, *Quo semel est imbuta recens servabit odorem*, or, if a Cask retains that Smell you first impregnate it with, so may it happen with Mankind, where the

Ovum is impregnated with the seminal *Aura* of a malignant Disposition, and the Fœtus retains this Taint for ever after ; for a Part once injur'd grievously, does always remain weak, and subject to the Diseases that Condition, were it accidental, makes them liable to : But as this is not a proper Place for such a Dispute, I here dismiss it. When a Consumption is actually begun, these Signs betoken it ; the Body is remarkably emaciated, the Cough is more frequent, the Expectoration is sometimes more or less free, sometimes also Blood and Matter are coughed up, or Matter of various Colours ; where it is malignant, they have a dull and heavy Pain on the Breast ; their Stomachs are inflated ; their Appetite is sometimes depraved, and at other times quite gone ; they are thirsty ; their Feet swell ; they are sometimes costive, at other times loose ; in the Night they sweat much ; they are often faint ; their Pulse is quick and weak ; they have a slow Fever, which encreases after Meals, and the Palms of their Hands and the Soles of their Feet glow ; they lose their Vigour and Strength. In an advanced Consumption, all the former Signs encrease, and moreover a Flux succeeds ; their Face becomes Hippocratical, as it is called, that is, their Eyes sink, their Temples flag close to the Bone, their Noses become sharp, their Ears cold, their Skin shrivels, and becomes yellow or pale. It is true, that all these Signs are not observed in all ; but in
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some there are fewer, in others more: The most distinguishing Signs are the frequent Cough, the Difficulty of Breathing, the slow Fever, and the Wasting away, and at last a Spitting up of purulent Matter. It is generally a Disease that continues for a long time, and, at the Beginning, is easy enough to be cured; but once it is confirmed into an Ulcer, it cannot be cured at all, that is, it is incurable, when the Matter smells, there is a Flux of the Belly, a Swelling in the Legs, and a Sweating: This purulent Matter smells grievously, if you spit upon the Coals. An hereditary Consumption is not at all to be cured, if it has advanced to but a small Pitch; because it is rivetted: Sometimes it happens, that if a few small Glands, that lie out of the Way of Respiration, are impostumated, they will be cured; but even this seldom happens. The immediate Cause of a Consumption is, Matter, which, being retained in the Lungs, corrodes the very Substance of that Organ: The remote Causes are, all such Things as make the Blood acrimonious. Among one of the first, and most frequent preternatural Causes, that introduce a Consumption, are Catarrhs, or Defluxions, which arise from the Glands that separate an acrimonious Lymph, from a Retention of the perspirable Matter, which flows plentifully into the Bronchiæ and Lungs, and erodes them, breaks its Vessels, extravasates, and produces all the Harms ensuing. That this may be more accurately

understood, it is to be observ'd, that there are in the Blood many heterogeneous Parts, such are Salts, Acids, and the like; if these are rightly mix'd and temper'd, the Blood is call'd balsamick: But when the Blood is extravasated, or when it only stagnates, then the oily and more balsamick Parts exhale, and leave behind the acrimonious and corrosive ones, which then begin their Actions upon each other, and are rubb'd into Matter. Let us examine what Symptoms precede, before any one is seized with a Consumption, and we seldom fail of hearing, that such Persons labour'd under a Pain of the Head, a Defluxion, and a Cough; from whence it appears, that the Effects of most Defluxions are first felt in the Head: Because, in Defluxions, the Humours swell, and the Head, by reason of its bony Covers, bears such a Rarefaction badly, and therefore Pain must attend such a State. Very often a Pleurisy is the Cause of such a Consumption: For if the Obstruction, that occasions a Pleurisy, be not taken away, but the Blood is suffer'd to stagnate, and impostumate, then follows an *Empyema*, or, an Abscess in the Breast, which, if not cur'd in forty Days, introduces a Consumption. It readily appears, why an Inflammation of the Lungs, a Spitting of Blood, a Quinzy, or a Wound, causes a Consumption. The Small-Pox leave behind them a Load of Acrimony, which impregnates the Blood, and is also apt to stick every where,

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by Reason of its Grossness, as appears by letting it out after they are over; and it is this gross Acrimony, which is not carefully taken off after them, that produces many other grievous Distempers, and even rotten Bones. Lastly, the Blood offending in Quantity and Acrimony, especially in a volatile one, erodes, opens, distends, breaks and spoils all the Vessels, and ushers in a Consumption. As for the non-natural Causes, the Air, as it surrounds us, often gives Rise to them; for Cold and Moisture in it seldom fail of producing Colds and Defluxions, and cold Air drawn into the Lungs, after heating the Body, is very often a Cause of an Inflammation, at least of an Obstruction of the Glands, which lays a Foundation for a fatal Consumption, as every Practitioner knows; or if the Air be tainted with acrimonious Parts, it often causes Consumptions. No Wonder then that we hear of the poor Labourers in Lime dying of Consumptions; for they breathe in nothing less than corrosive Particles; nay, Students, who sit in their Closets newly plaister'd, or sleep in them, do very often suffer grievously thereby. What shall we say of the Workers in Mines, or in chymical Elaboratories, where, if great Caution is not taken, they must be prejudiced? Likewise they who lie with consumptive People must be endanger'd from the Steams of the Sick, which ought to be warded off by some Troches held under their Tongues, if Necessity obliges them to a Cohabitation.

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Our Victuals and Liquors contribute their Share : For if certain Victuals be eaten, they specifically introduce it ; and if good Victuals are thrown in too plentifully, they produce Crudities and Grossness, and at last Inflammations or Obstructions ; and Wine, taken too copiously, inflames the Juices, and creates at last Obstructions ; for it is observed that Wine makes the Blood denser and grosser, by carrying off the thinner Parts, and therefore is apt to inflame us. Excessive Motion can never be wholesome ; because it obliges the Blood to run swiftly through the Lungs, and very often so stretches the Vessels, that a Breach follows ; the same may be said of Shouting aloud : And, on the other hand, if we make use of no Exercise at all, then the Blood grows thick and sour, and stops all natural Discharges, which, being heaped up in the Blood, cause various Degrees of Acrimony, according to the Time and Nature of the Suppression. Long Watchings render the Blood gross and sharp, and Sleep in Excess does also vitiate the Blood, and lend a helping Hand to a Consumption. As for the Secretions, the menstrual Flux in a particular Manner being suppressed, does frequently break the Vessels of the Lungs, and erodes them, so that in this Case Consumptions are common ; and where People are subject to the Bleeding Piles, they have the same Effect. The Passions of the Mind, whether Grief or Anger, spun out into a Custom or Length, do greatly contribute towards
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Consumption; because from Grief the Spirits are exhausted, and the Nerves of the Lungs so contracted, that the Blood stops in them, and becomes sharp and irritating; and from Anger they hurry about the Blood in the Vessels so furiously, that the watry Parts are exhal'd, and the inflammatory ones are left behind, which stick in the Lungs, and there inflame and impostumate. As for the natural Causes, a cholerick Constitution is one of the most common; because from every little Increase of Motion of any Kind in Mind or Body, the Blood is heated, and rushes with Violence towards the Lungs, where it often stands still, and inflames them by reason of its Haste and Force; and a phlegmatick State is the Cause of an asthmatick Consumption, because the Grossness of the Blood occasions a Stagnation and an Inflation of the Glands, with thick Phlegm: Youth therefore is most liable to acute Consumptions, and advanc'd Age to asthmatick ones. The Female Sex become subject to slow Consumptions from their sedentary Life, and the Fair and Young very frequently make themselves consumptive by lacing too strait; for this, by the too great Pressure, straitens the Vessels of the Breast, and hurries on Spittings of Blood, and Consumptions: And, moreover, the natural Formation does often contribute to it; wherefore strait or distorted Chests give Rise to them. I have recited the immediate and remote Causes, let us now give an Eye to the Symptoms; and

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first the Wasting of the Body is to be accounted for, which generally happens, especially in the acute ones, from the Ulcer of the Lungs, whose purulent Particles enter the Blood-Vessels, and cause feverish Commotions, which exhale the nutritious Parts, and leave such behind as prove depredatory; for where the soft and balsamick Parts are exhal'd, and none but putrid ones are left, they are of such acute or angular or hard Parts, that upon moving on, they pierce and tear the whole Blood to Pieces, and even abrade and make the Vessels themselves thin, and unfit to hold their Contents: Nourishment therefore does us no good; because all that is taken is converted into a caustick Liquor, and wastes us. The slow Fever that attends Consumptions depends on these same saline and sharp Particles, that are continually stimulating the Heart to frequent Contractions, and as the Blood circulates in proportion to the Frequency of the Pulsations and the Strength of them, therefore whenever the Cause of these Contractions is augmented, the Blood grows hotter, and a Fever-Fit ensues, which terminates in a Sweat, and then the Fever is over till next time that the Matter is resorb'd in a sufficient Quantity; and although this Matter is always passing into the Blood from the Ulcer, that is continually oozing, yet the Fit never begins till there is a certain Quantity heap'd up in the Mass, sufficient to raise a Commotion; as it happens in other Fevers, the Paroxysm never beginning till the Blood is
full

full of proper Matter to a certain Pitch: The Difficulty of Respiration arises from Matter that stuffs up the *Air-Place*, or from the Space the Blood takes up in the Fits; either of which take place continually: The Cough depends on the Sharpness of the Matter stimulating the Membrane of the *Trachæa Arteria*, and in such a Condition the Lungs never can want acrimonious Matter; the Ulcer begins the Work, and so much Acrimony is milk'd into the Lungs from their frequent Contractions, that the Cough is perpetual, giving few Moments of Ease or Rest, till their Days are finish'd. Their Appetite is quite destroy'd, because the Fever takes up into the Blood all Moisture, the Fibres are left bare and languid, and moreover consumptive People are oblig'd to take so many obtunding Slops, that the Ferment and the Fibres are both destroy'd; for Oils do obtund the Salso-acid of the Stomach, and at the same time do relax the Fibres thereof. Consumptive People are often subject to Fainting Fits; and there is no great Wonder, since the Spirits must be supported to escape Faintings, and in the present Case all Nourishment is evaporated; and therefore Faintings must ensue. The Flux is one of the last Symptoms that attends Consumptions, arising from the great Acrimony of the Humours stimulating the Intestines, and from their Laxity, from the Want of Vigour and Spirits: The Choler in Consumptives is very sharp, and as it oozes constantly into them, it

produces its natural Effects, that is, it stimulates, and causes a Flux, the Humours thrown off are so expensive, that Life lies at stake; and this generally closes up the Scene. It is easy to know how to avoid a Consumption, by a right Use of the evident Causes; a dry and moderately warm Air, Victuals of easy Digestion, without any Saltiness or Grossness in it, and the other Causes above-mention'd being justly manag'd, will secure us from Attacks.

Among the most dangerous Enemies of Life that infest the Region of the Stomach, the *Cholera* is one of the chief, as being dangerous of itself, and also forming a long Chain of Illnesses: That therefore in such a Case we may know what is to be done, we will first take a short View of it in all its Parts. The Name of this Disease denotes its Cause: For as cholerick Humours are thrown upwards and downwards in this Disease, in a furious and grievous Manner, so as to endanger the Lives of many in a few Hours, it has therefore merited the Name of *Cholera*, or, as the Vulgar call it, *Cholera Morbus*; because it is a Disease by which Choler is thrown off; but as Names are of very little Use to the Knowledge of Things, I shall not insist on its Etymology, but proceed to its Nature: Wherefore this Disease is divided by Authors into two Kinds, of which the one is called the *dry Cholera*, in which Wind is thrown upwards and downwards, and this generally attends Hysterical Persons; and the other is call'd the *moist Cholera*,

lera, which is the most dangerous, and therefore I speak of this Sort in this Place; that we may therefore proceed in proper Order, I shall recite the Symptoms that attend this Disease, and draw such Consequences from thence as naturally flow from them: There are some of them that are common to other Diseases, and others peculiar to itself; among the common Symptoms the following are the chief, namely, violent Contorsions and Gripes of the Bowels, which do principally infest them at the Pit of the Stomach, Prickings and Pains in the Region of the Loins, a Heart-Burning, a Distension of the Stomach, an Hiccough, a nidorous Crudity, a Loathing of Victuals, an intolerable Thirst, although there be no sensible Fever, but mostly a putrid Fever attends it, with a quick and weak Pulse, and, if the Disease continues, very often a Faintness, and even Swoons, Palpitations of the Heart, Convulsions, an universal Languor, and a Coldness of the Extremities come on: But the Symptoms which do peculiarly belong to this Disease are, a violent Purging and Vomiting, with great Force and Hurry, of bitter and sharp Choler, which is of various Colours, according to the Nature of the Bile that resides in the Stomach; for it is sometimes yellow, at other times green, and often black. However, all the aforesaid Symptoms do not attend every Patient; but sometimes one, at others another Set of Symptoms invade, according to the Degrees of Sharpness. Having

thus briefly recited how to discover this Disease, I shall, in the next Place, shew you how to discover the Part affected, or the Seat of the Disease: But before I set about that Matter, I cannot think it amiss, as many Symptoms of this Disorder reside about the Stomach and small Guts, first to describe, in as few Words as I can, what Passages there are for the Humours to come that Way, and what Humours should naturally flow thither, their Nature, Motion and Use, that from these, as Foundations, the Functions prejudic'd in this Disease may more readily be explain'd, the Truth may be laid open, and more easily comprehended. Wherefore considering attentively the whole Channel of the Intestines, we find but three Ways, by which any thing can flow to the small Guts; namely, the Pylorus, or lower Orifice of the Stomach, the Gall-Duct, and the Pancreatick Duct; by the lower Orifice of the Stomach two Things are carry'd to them, first the Spittle, which being spued out of the Maxillar and Parotid Glands, and carry'd through the salival Ducts into the Mouth, from thence convey'd by swallowing into the Stomach, for the Assistance of Digestion, and into the Duodenum, where it meets with the Bile and Pancreatick Juice, which do further assist in the Digestion, and serve so to soften the Aliments, as to make them yield their Tincture, which Affair the Stomach alone could not effect; and I do not at all question, but the Acrimony and Contrariety of these Juices

Juices have an Effect as well upon the Intestines as the Victuals; for the Victuals pass from a large Sack into a narrow Channel, and this Channel is stimulated by these Juices, so that it cannot fail of making all the Victuals to come under Contacts more frequently, and such as will grind it into minute Parts. I shall not here enter into a Detail of the Nature of the Choler or Pancreatick Juice; that is done well by other Hands: Only in general a Conflict arises between them, and the Guts are contracted, and their vermicular Motion is hasten'd, and their compressive Power exerts itself more in proportion as there is a Disparity of Parts in the Juices and Victuals: The Choler, being bitter, is reputed a fix'd or volatile Salt, and the Pancreatick Juice has always been esteem'd an acid, so that the Conflict spoken of cannot be wondred at. *Swalve*, indeed, looks upon this Commotion so gentle, that he calls it a *silent Effervescence*, or a *Lactescence*, and doubtless he is much in the right; for it is not easy to perceive any Effervescence, or any Commotion at all, in the Intestines of living Animals dissected, yet we feel the Effects of such a Struggle; neither do we see that Acids, when Alkalines are pour'd upon them, do always raise a Conflict, as in the Precipitation of Sublimate out of Water by any alkaline Body, or the Precipitation of any Gum or Oil out of Spirit of Wine or Water by an Acid, as in Tincture of Benjamin, or in Emulsions by Spirit of Nitre,

or any acid Spirit: However, the most averſe to this Sort of Reasoning muſt acknowledge, that theſe Effects follow from a Contrariety of mechanical Proportion in Bodies, whoſe peculiar Motions we are not able to account for. As for the radical Subject of this Diſeaſe, let us apply to the Symptoms themſelves to unravel it, amongſt the chief of which we muſt look upon the violent Diſcharges upwards and downwards; whoſe Seat, by the Pains and Torments the Patients endure, ſeems to be below the Stomach, or otherwiſe ſo great a Quantity of Choler could not be diſcharged, as we ſee thrown off by thoſe labouring under this Diſeaſe. Let us now proceed to the Cauſe of this dangerous Diſeaſe, which is divided into the outward and the inward, which latter is either remote or immediate: The immediate Cauſe is an Irritation produc'd from Humours lodg'd there, which cauſes convulſive Motions in thoſe Parts; theſe Humours are reputed acrimonious in general, which being ſeparated there from the Blood, do ſtimulate the Membranes of the Guts vehemently, and ſo put the whole Body into violent Spasms and Contractions. Theſe being premis'd, that I may leave nothing unſpoke of which may ſerve to illuſtrate this Matter, I ſhall ſhew, how from theſe Humours brought to the ſmall Guts all the foregoing Symptoms may be deduc'd; which does not ſeem ſo difficult, becauſe there is a Circulation from above below, as alſo through the Lacteals to the

the Heart, from thence to all Parts of the Body; hence those vitious Humours flowing to the small Guts do raise Conflicts with the Chyle, and do produce Sharpnesses and Flatus's, which, because they stimulate the Intestines violently, do oblige the same Contents, such as the Bile, which may either be very bitter or acid, and in both these States may be stimulating, by their stimulating Force and the contractile Power encreas'd, to go upwards and downwards alternately, as the Irritation is greater or less; which if they infest the Stomach, or Pit of it, they give a Heart-Burning; if they fix upon the Diaphragm, they produce a Hiccough; or if upon the Parts of the Intestines, where the Mesentery is fix'd to the Loins, they produce Pains there, and in the Back; they raise a Loathing, if they fix upon the Stomach, and destroy its Ferment; or a Thirst, from the Discharge as well as from the bitter Taste they give to the Saliva; there is a nidorous Crudity, by reason of the specifick Degree of Digestion in the Humour excreas'd; the great Pains and Gripes in the Belly are an Effect of the stimulating Salts, and the Distension of the Flatus, rais'd by the Conflict of the Salts; these same Humours do fix upon the Heart, and raise Anxieties and Uneasinesses, for sometimes they irritate the Heart, and change the Pulse, according to their various Degrees of Irritation, that is, they sometimes cause a Quickness in the Pulse as well as a Weakness, because they stimulate
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the Heart often ; but as there are few Spirits left, it is weak, so that a Fever and a Languor are almost necessary Consequences of such a State of Affairs: Very often there is an involuntary Motion produc'd ; because the Spirits run irregularly into the Nerves and Muscles, and inflate them, or, in other Terms, cause Convulsions in them : Sometimes they are troubled with Faintings and with cold Sweats ; because from such extraordinary Discharges the Spirits are evaporated, their Generation is impeded, and consequently their Distribution into the Parts ; so that Faintings must ensue, which are only evident Tokens of the Want of them. The internal Causes being explain'd, as well as the Origin of the Symptoms, we must also clear up the external Causes ; amongst which the Air occurs to me, as being one of the most immediately necessary for Life, and such as we cannot live a Moment of Time without, which, if it be very sultry, it creates Choler, and consequently endangers this Disease's Generation: Next, our Nourishment that offends as well in Quality as in Quantity, and especially those, which, by too excessive Acrimony, breed acrimonious Humours, or, by their easy Corruption and Solution, do produce Effervescences or Tumults in the Intestines, such are Cucumbers, Melons, Plums, Peaches, and such like Fruit ; to which we may add the other Non-naturals, because they very often do breed acrimonious Humours, or give occasion

sion to such Conflicts in the Bowels, such are Watchings, which, by exhaling the aqueous Parts, leave the Blood too sharp ; such is Motion to Excess, which also evaporates the Blood to an acrimonious Mass ; neither are our Secretions less in fault, by whose Retentions so many odd Qualities are impressed on the Blood, or by whose excessive Discharges the Blood becomes very sharp and irritating ; and, lastly, the Passions of the Mind contribute their *Quota*, for Anger is known to move the Blood too furiously on, and dissolves its Texture into an acrimonious and stimulating Body. We may justly then repute this Disease an acute one, more especially, if no evident Cause has preceded ; whereas if it has been produc'd by such evident Causes as Cucumbers, and the like, there is less Danger : For the Depravation of the Blood is much a greater Cause, than a Meal of bad Food, which can readily be taken off by suffering the Vomiting and Flux to go forward for a while ; however in either Case, where the Pulse grows weak, the Heart palpitates, Faintings ensue, and cold and clammy Sweats invade, Death is at hand. I have laid before you the evident Causes of this Disease, you must then forbear all such as are known to be prejudicial, and substitute their Contraries ; that is, you must avoid all Things that are apt to generate Choler and sharp Humours.

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There is no Disease more spoken of by Physicians than a *Pleurisy*, not only, as I suppose, because it happens so frequently, and hurries on grievous Symptoms, and carries Danger with it, but also because all antient Physicians have referr'd all their Rules and Axioms to Pleurifies: Thus *Hippocrates*, going about to treat of acute Diseases, and Diseases of the Breast and Lungs, takes a *Pleurisy* for his Example; so also *Galen*, in assigning his Signs, and in his Instructions on the Art of Physick, uses no other Example than a *Pleurisy*: Thus *Argenterius* begins his Consultations with a *Pleurisy*; so *Monardus*, *Aurelianus*, *Archigenes*, and many more, who dispute about Bleeding so eagerly, take all their Examples from a *Pleurisy*: As therefore it is made so necessary by them, I shall take the Liberty to descant upon some of the nicest Particulars of a *Pleurisy*. It takes its Name from the Part affected, that is, it is call'd a *Pleurisy* from the Membrane call'd *Pleura*, where the Disease begins. The Nature of these Parts being liable to Diseases of various Kinds, and its Name being diversly deriv'd, and the ambiguous Acceptation of the Word *Pleura*, because it denotes the Side, and Ribs of the Side, and all contained there, occasion that a *Pleurisy* of it self does not signify any one determinate Place in the Breast; whence it happens that every Pain that seizes in the Breast is not call'd a *Pleurisy*, but some are call'd Pains of the Side, as not meriting the

Name

Name of a Pleurisy. A Pleurisy in short is describ'd to be an Inflammation of the Pleura, of the adjacent Muscles, and of the Lungs, with a pricking Pain of the Breast, a Cough, a Difficulty of Breathing, a continu'd Fever, a frequent and hard Pulse. The Part affected is the Membrane call'd the *Pleura*, which invests and covers the Ribs on their Inside towards the Lungs, which is hard, white, strong, nervous, and every where double, between which Duplication creep the Vessels: The outer is the thicker and harder; the inner, covering the Ribs, is the thinner. Beside the Membrane, the Muscles call'd *Mesopleurii*, or Intercostals, are also affected; for, as *Galen* says, the Membrane being affected, the internal Intercostals are also at the same time affected: As when an Inflammation begins in the internal Muscles, it is presently communicated to the *Pleura*; also from the Difference of the Pain it is evident how different Parts are affected; for when the Muscles are affected the Pain is obscure, but when the Membrane is seiz'd the Pain is pricking, and so violent, that the Patients complain, as if they were pierc'd thro' with a Needle. And it appears upon Dissections made by *Riverius*, *Platerus*, *Zecchius*, *Ballonius*, *Helmont*, and others, that the Membrane is not only affected, but also the Lungs are greatly inflam'd: For by the Communication of the two Membranes, and by the Spitting up of Blood and Matter, it is evident

evident that all are affected together; and who can imagine that these Parts can be safe, when Matter passes through these Parts to the Lungs? There are many Differences of Pleurifies; the following will serve our Turn at present. Upon Account of the Parts affected, one is call'd a Bastard, the other, a true one: The *Bastard Pleurisy*, is that which seizes upon the Muscles only; the true one is, when the Muscles, the Membrane and Lungs too are seiz'd. Next, another is call'd *Dorsal*, which seizes the Patients near the Vertebrae of the Loins, near the great Vessels; and this is the Pleurisy mention'd by *Hippocrates*: Another is call'd a *Lateral Pleurisy*, when the Pain is felt in the Side: Then the Membrane being inflam'd, is another Sort of Pleurisy; for it is affected near the Lungs, or at the Ribs only: Another Difference arises by reason of the Matter, because some arise from the Blood only, others from viscid Humours lodg'd and deposited there; namely, from Bile, when Choler reigns in the Blood, and when what they spit up is of a Colour like Choler; and so of the rest: Another Pleurisy is moist, another dry; when, to wit, much, or little, or nothing at all is spit up: Another is beginning, another confirm'd from the Time it has lasted: One is also call'd benign or kindly, and another, malignant, according as it is attended with gentle, or very bad Signs. The remote Causes of a Pleurisy are a Plenitude, by which the Pleura's Vessels, namely,

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the Azygos, by Reason of the Rarefaction of the Blood, and its too great Expansion, for want of Space, are preternaturally distended, and, perhaps, broken; whence is the Blood's Circulation impeded, which therefore flowing out of the Vessels, stagnates there, and occasions an Inflammation; or the gross Humours are driven into the Vena Azygos, and stagnate there; and such gross Humours are driven thither, as often as Exercise or Heats are too immoderate, and the Patients are too soon cool'd after them; or as often as upon violent Exercise or Heat they drink cool Liquors; so that Limonade, in warm Countries is found to be a frequent Cause of Pleurifies; or if upon Heats we expose our Breasts suddenly to a Northern and cold Air, this Air so straitens the Vessels, which it approaches to or touches, that an Inflammation almost necessarily ensues: In all these mention'd, a Pleurisy is a common Sequel; for where-ever a *Stimulus* is fix'd upon a Part from an internal or an external Cause, that is, where-ever the Blood is gross and yet saline, it will stick and prick and invite a great Flux of Humours to the Part so affected, a Distension and an Inflammation; or where-ever the Fibres are contracted by Cold, they stop the Flux of Humours that Way, and then an Inflammation follows also; and very often cold Liquor or iced Liquors being taken plentifully, and arriving at the Vessels, and there cooling the Blood, and thickening it, there is a Stand put

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to its Motion in the narrow Channels, and a Pleurisy ensues: For the Humours being thus congealed, it cannot pass as formerly, and more following, there is an Accumulation of impassable Liquors, a Distension and a Plurisy confirm'd; which if it is not taken off by proper Means, impostumates, and causes them either to spit it up, or it breaks into the Lungs or into the Breast; if the Blood either stagnates, or is extravasated, it always acquires an Acrimony, because the Salts in the Blood, in their natural State, are wrapt up in oily Parts, or swim partly in the watry ones; whereas whenever they stand, they begin to attract their Like, so that their Salts approach nearer to each other, and by Heat and Impulse exert their Force, that is, they stimulate and tear according to their Figures and Quantities; upon either Account then Pain will follow an Inflammation, and an Abscess is the Offspring of an ill-judg'd Pleurisy. The evident Causes are all such as do occur daily and introduce it; the Air, which we necessarily draw, may occasion a Pleurisy in divers Manners; by altering, cooling, congealing, rarefying, moistening, drying the Blood, or by stopping the Pores by its Coldness; then our Victuals and Drinks may increase the Quantity of the Blood, or may heat it, and so attenuate or thicken it; such are Victuals of good Nourishment, as Fowls, Partridges, Calf's Flesh, and the like; or may make it more acrimonious, or may increase phlegmatick Humours, or congeal the Blood:

Blood : Such are Victuals season'd too much with Pepper and Salt, such are Eels, Mulletts, and other glutinous Diets ; also a large Draught of cold Water, more especially of Water from Snow or Ice melted down, particularly after Sweating or strong Exercise, or drinking too plentifully of generous Wines, which heat the Blood and render it thick and glewy : Motion and Rest contribute their Share when they exceed in too much, or too little ; for from too much Exercise often repeated, the Blood is put into an excessive Motion, and the perspirable Matter is too plentifully thrown off by the Pores, so that a Grossness ensues of Course ; and from too little, the Vessels are filled to a great Pitch, so that they lose their Contractile Power, and consequently the Blood grows glutinous and obstructive. Sleep and Watching do also greatly contribute towards producing a Pleurisy ; inasmuch as Nature keeps, as I may say, Holidays by Sleep, and the Matter of Perspiration is increased within us, the Blood grows thick either by too little or too much Perspiration, and therefore grows obstructive ; and by Watching, the finer Steams fly off, and leave the Blood a Solid, and consequently it cannot run, but stops every where : The Secretions are strong evident Causes, for if such Secretions be made of thin and diluting Matter, which used to keep the Blood fluid, or of such as were destin'd to attenuate the Blood, or of such as were used to temper the Acrimony and Salts of the

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Blood, great Prejudices are done to the Mass; but if on the contrary, any Suppression of an usual Discharge precedes, as of the Menstrual Flux, of the Lochia, or of the Bleeding Piles, then the Blood is alter'd in a thousand different Manners, which are best judg'd of by the Symptoms ensuing: All the World knows how far the Passions of the Mind do influence human Bodies, so in excessive Anger the Blood is moved violently forward, the watry Parts are exhaled, the saline and oleous are rubb'd together, the Choler is increased, and a thick hot Blood is produced; but in Terrors and Frights, the Spirits are clogg'd in their Motion, the Blood is arrested, it grows thick and sour, and by growing thus gross, may easily be driven into the small Vessels, and by obstructing them, may produce many different Diseases. As to the Causes of the distinguishing Signs of the Pleurisy, the pricking Pain arises from the Blood's Stagnation or Extravasation, upon either of which the more obtunding Parts fly off and leave the Mass so standing or extravasated, acrimonious, and according to the Degree of Acrimony, and the Part on which it is deposited, the Pain is more or less acute; and that there is such an Acrimony appears, because, at the Time of Suppuration, the Pains grow more pricking, and continue to do so till the Whole is impostumated, or turn'd into Matter: And if we examine into what happens to Parts corroded by acid Spirits, namely, that they are eroded
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and grow whitish, we may give a guess that the same happens to us in the Time of Suppuration from the same Salts residing within us: And it is an Observation well grounded, that aromattick and volatile oily Salts do hinder the Generation of Matter. The Thirst arises from the Parts being too much agitated, and so leaving the Parts dry. The second Sign is the Cough, which arises from the acrimonious Humours deposited on the Lungs, and there molesting their Motion and Action: For where-ever any acrimonious Parts are spu'd out into the Air-Chamber from the Glands, or where-ever the Lungs cannot be sufficiently expanded, and in a more particular Manner where-ever such a grievous Disease as an Inflammation seizes on the Lungs, there Inspiration is a Sort of Pressure on the Part affected, which cannot be suffered, and therefore at every Turn we offer to draw in our Breath, the Lungs contract, and cause thereby a forcible and involuntary Expiration, which we call a Cough, and the bloody Matter which is thrown up by Coughing, comes from the Lungs themselves, because the Pressure and Contraction too are sufficient Causes of the small Vessels being broken, and throwing up their Contents, and this particularly happens towards the Stage of Suppuration, when the Vessels are highly stuffed, and they are rendered thin thereby; for Vessels are solid or thin, as they contain fewer or more Contents within them, because where they contain

little Matter within their small Tubes, the Fibres come cloſer together, and their Sides approach nearer to each other, and then they are ſolid; but, on the other hand, if they are greatly ſtretch'd with Contents, the Fibres are ſet at greater Diſtances from each other, the longitudinal and circular Threads, are lengthen'd and relax'd, and the Interſtices are greater, ſo that Breaches are eaſily and readily made in them. The third Sign is the Difficulty of Breathing, which ſprings from the leſſening of the Air-Chamber in the ſame Proportion as the Tumour encreaſes: For where once an Obſtruction commences under a Fibre made too tenſe or rigid, the Motion of the Blood is haſten'd thither, and an Inflammation enſuing, the Function of that Part muſt be greatly impeded; now the Fibres are too rigid in Compreſſions, Contractions, Contuſions, and the like Caſes, and then, when the Blood ſtagnates, the leaſt Oſcillation is communicated all over, and particularly at the Part affected. The fourth Sign is the Fever, the Cauſe of which is the Frequency and Celerity of the Pulse, and that Frequency has for its Cauſe the Acrimony of the Humours that ſtimulate the Heart, whence the Pulse is in this Caſe always more frequent, whether this happens from a Conflict between contrary Salts, or a Friction of Bodies againſt each other, which may readily happen in ſuch Hurries as the Blood is now under: If therefore ſuch Commotions and

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Conflicts, from what Cause soever they proceed, ensue, Symptoms of various Kinds follow; such is Thirst, from an Evaporation of the necessary Fluids that moisten the Tongue; such is Loathing, from the Ferment being disturb'd, as the Mass, from whence it is secreted, is at this Time; such is a bitter Taste in the Mouth, from a Mixture of Bile among the Blood; and such are many other Symptoms, that are natural Consequences of a Fever, and which to account for in this Place would be too large a Digression. The fifth Sign is the Frequency of the Pulse, and this Sign along with the Quickness of the Pulse are pathognomonick and distinguishing Signs of a Fever, and agree to Fevers alone and always; because if these two Signs are present, Patients have a Fever; if not, they are free of a Fever: This Frequency arises from a too great Rarefaction of the Mass of Blood, proceeding from the Conflict of contrary Salts, or from the Attrition of the Parts of the Blood against each other. Having taken a View of the Signs, let us also consider in a brief Manner the Danger of this Disease: Signs of Concoction do always give us Hopes; but the Signs of Crudities, Fears. If we would certainly know what is like to follow in Diseases, we should make a Comparison between the Patients Strengths, and the Violence of the Disease: For if Nature be strong, the Patients have Reason to hope well; but if their Spirits are exhausted, they have Reason to

dread every little Symptom: And these Things are best guessed at from the Functions and Secretions, which if they be rightly perform'd, all goes well; if the animal Spirits be sufficient, if the Circulation be well performed, and if our Appetite and Digestion be little injur'd, then Diseases may be easily bore; but if the contrary happens, Death must ensue. In a Pleurisy sometimes the Patient does not spit up any thing, namely, in the Beginning, and all this while the Pleurisy is call'd *crude*, and if it remains so at the *State* without Relief, then nothing but Death can be expected, or however they dwindle into incurable Diseases; or if the Spitting began to come up freely, and if all of a sudden it stopp'd, this Case is call'd an ill-judg'd Pleurisy; if the Pain of the Breast continues, there is Reason to fear an Impostumation or a Gangrene, and Death. Those Spittings that are dy'd green or yellow, or of a dirty Brown, do all denote Mortifications, and you are seldom deceiv'd if you make a fatal Prognostick: But if Blood be thrown up the first four Days, and even to the seventh, there is Hope of Life; because as the Inflammation is Blood made grosser by standing still, and the Inflammation cannot be cur'd without translating this Matter, or making a particular Discharge of it from the Part affected, this Discharge therefore is salutary; first, because the Matter offending is evacuated, and then the Lungs are not much injur'd by the Breach,
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for that happens always at the Extremities of the Capillaries, which do readily reunite; whereas, were the Breach to happen at any large Section of the *Arteria Pulmonalis*, Danger must ensue; but the Lungs are seldom so highly inflated as to divide at every Inspiration the small Breaches made at the Capillaries, and therefore they readily unite, at least with the Assistance of a few proper Remedies; however, if this Blood be late in being spit up, by its Stoppage there, an Impostumation follows, and lays a Foundation for a Vomica, an Empyema, or even a Consumption, as the great *Hippocrates* has observ'd: If the Spitting then appears early, it is a Sign that the Impostumation will soon be carry'd off; indeed it is never safe to trust to this Spitting; for whoever is call'd at the Beginning, should take care to bleed plentifully to prevent an Abscess, which, as we may say, is only a Plank after Shipwreck: However, as proper Persons are not always consulted early enough, Expectoration ought next to come in play. In these Inflammations it may be of some Use to inspect into the Condition of the Urine, which, at the Height, is red, without any Sediment in it at all; but when the Fervor and Hurry are over, it settles, and denotes the Time of the Inflammation. It is a certain Token, that if in fourteen Days Time Pleureticks do not spit up the Matter, they will fall into some dangerous Disease of the Breast, or into a fatal

Flux : The Matter is acrimonious, and entering the Blood Vessels it cannot fail of producing dismal Consequences, of which a Flux is one, and not one of the least ill Consequences ; because when a Person is fatigu'd with a Disease, that takes off their Rest, and consumes their Spirits with Pain, to be then seiz'd with another, that yet evidently wastes them, and hinders a proper Expectoration, they die of a Defect of Spirits, and of an Asthma, from Matter that lodges, which ought to have been regularly carry'd off by the Lungs. Let us at last, therefore, from the Premises, see what Sort of Diet is convenient for such Persons : In order to correct the sharp Humours, such an Air is proper as is moderately cool ; but it must not be too sharp, because it then proves stimulating, and thereby invites a greater Afflux of Humours to the Lungs ; Let their Diet be of smooth Things, such are Barley-Water, Emulsions, and any thing that is watry and mucilaginous, which abate the Salts sticking in the Part ; Jellies, or gelatinous Things serve our Purpose also, inasmuch as they, being melted by a gentle Warmth, do obtund the Salts of the Blood, which are render'd in some measure caustick, and apt to exulcerate the Parts : Of Fruits such only are proper as obtund or dilute, by their Mucilage or Water, wherefore all Sours, such are Lemons, Oranges, Barberries, Currants, Verjuice, Vinegar, and the like, are to be forbidden ; because they con-
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geal the Juices, and contribute to make them stagnate ; so that Ptisan made up of Liquorice, Raifins, Figs, and such like, Syrups of Violets, of Maiden-Hair, or a Decoction of the Ingredients of which the Syrup of Maiden-Hair is made, are commendable ; cold Water is improper, because it contracts, and Contraction is a producing Cause ; for where the small Vessels are contracted, the Liquors find a Difficulty of passing, and therefore do often stand still, and breed Inflammations, as all know : Wine is forbid in all inflammatory Cases, because it heats and inflames more ; however in the greatest Inflammations, if it be diluted, and be a sweet Wine, then it is allowable, for Water being too cold, and Wine too hot, so much as will give the Water a little Warmth hinders its contracting Power, and no more of Wine must be allow'd than what will effect this ; wherefore in such inflammatory Cases, a fifth, or a sixth Part of Wine only is allowable, and our Sack-Whey therefore is allow'd, made very small, in all inflammatory Cases. Motion is not allow'd in this Case : For as all we aim at is to curb the excessive Motion of the Blood, in the Beginning especially, Motion acting in a contrary Manner, it must be forbidden ; and therefore a Confinement to Bed is necessary, which we seldom need to be solicitous about, because Pain pins our Patients down : And now also Sleep is of Use, which we dare not attempt by Medicines in the Beginning, because if we were to give

Opiates,

Opiates, we should oblige the Blood to stagnate irrevocably ; whereas our main Design is to promote its Passage, and by so doing, to cause the Tumor, which accompanies every Inflammation, to subside : But Opiates would fix the Humours, whose Passage we must at any Rate procure ; and therefore Sleep must only be promoted by smooth and diluting Remedies, and by keeping quiet ; so that if our Patients can but slumber three Hours in twenty-four, and that at different times, we must rest contented : Watching is therefore bad ; because it is a Sort of Motion of the Spirits, which does cause an Evaporation of them, or however causes too great an Influx of them into the Parts, and encreases Inflammations : Grief and Anguish cause the Blood to congeal and stagnate ; and therefore are Passions to be avoided. The Secretions, and particularly those of the Blood, ought to be regular : For Suppressions encrease the Quantity, and vitiate the Quality of the Blood, either by making it sour and congealing the Fluids, or by making them stand still for want of Room to move forwards : As therefore I have made you see the Consequences of the Mismanagement of the evident Causes, it is easy to know how to regulate them by observing a Mediocrity.

The *Scurvy* affords a large Field of Speculation, which however I shall contract into as narrow a Compass as possible, in order to direct the Judgment on the Diet, and other
evident

evident Causes: It is not quite so new as not to be mention'd even in the Days of *Hippocrates*; for what other Construction can be put upon the stinking Breath, the Gums leaving the Teeth, the Bleeding at the Nose, Ulcers of the Legs, and the Spots on the Skin? This is what Moderns, after *Pliny*, call the Scelotyrbe, or the Pains in the Legs, and *Celsus* also makes mention of it under the Notion of great Spleens, a stinking Breath, Eruptions of Blood, Ulcers in the Legs, and black Eschars; many other Authorities, if Occasion requir'd, might be produc'd to shew that the Scurvy is of no late Date, and every Author vary'd its Name, as best suited the reigning Symptom: Hence some gave it a Name of the Disease of the Arms, Legs, and Gums. It is peculiarly familiar in Countries or Counties where they breathe a Sea Air, which gives us some Light into its Cause; let us now descend to a Description of it, which is, that it is an ill Habit of the whole Body, with a stinking Breath, an Erosion of the Gums, a Weakness of the Legs, Spots, Pains, Bleedings, and at length a Consumption, call'd by the Name of the Scorbutick Consumption: It is indeed no great Matter to inquire how Persons labour under a Consumption of the Lungs; for as a Scurvy only denotes an Acrimony of a malignant Sort, which is capable to erode or ulcerate the Parts, it is no matter whether this Acrimony be of the alcalious or acid Sort, since either is capable
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of introducing the same Consequences, and that in Part the same obtunding Remedies do equally serve to cure both Sorts; wherefore do Physicians order all the Oils and oily Medicines, all the mucilaginous and all the watry and diluting Drugs, in order to hinder the Salts from running into Clusters, to sheathe them in their Pores, and so to hinder their ravaging Effects, which cause them to tear and ulcerate the Lungs; not that specifick Alteratives ought to be neglected, or postponed, if we can arrive at the true Nature of the reigning Salts. There are many Differences then of this Disease, namely, it is hereditary, when we derive it from our Parents; or it is accidental, which happens from the Fault of our Juices, by reason of the Manner of Life and Diet which have been made use of; or the Contagion, by which we receiv'd it: It is recent, or confirm'd, in which last the whole Mass of Blood is contaminated and corrupted, as appears by the Signs of the Degree of the Disease. It is most accurately divided into the Cold and the Hot Scurvy, and this denotes the Cause of the Disease, and the Nature of the offending Salts, best of all: It is also differenc'd from the attending Symptoms, some Scurvies being accompanied with Gangrenes, others with Dropsies, others with an Atrophy, others with a wandring Gout, others with Convulsions, others with a Flux of the Belly, others with Rickets, and so forth. There is another Difference taken
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from the periodical Returns of it, namely, some are infested with it in the Spring, others in Autumn, and others again are never free of it. Diseases are always more readily known by coming to the Knowledge of the Seat of them ; for how can the morbid Cause be known, how can Remedies be properly prescrib'd, and the Cure be perform'd, if the Part affected be not known? The main Seat of this Distemper is the whole Mass of Blood, which consists of innumerably heterogeneous Parts, according to *Hippocrates*, which, however, so long as they enjoy an equal Harmony, and are mix'd in a certain Proportion, so long is our Body esteem'd sound : For from the Blood our Spirits are separated, and so the Principle of Motion is preserv'd ; but as soon as any one Principle of Matter predominates over the rest, the Spirits are greatly disturb'd, and Evils of all Kinds ensue. Let us now take a View of the Signs and Symptoms of this Disease : It is attended with a great Number of Symptoms, and is often mask'd in different Habits, of which some are observ'd in one, others in others ; for it would be strange that one Person should labour under every Symptom that attends a Scurvy : In the Head we meet with Pains, Giddiness, Palsies of various Parts of the Body, the Colour of the Face is chang'd from its natural Beauty, the Teeth are often black, or fall out, the Mouth smells, the Gums are full of Pain, are red, swell, or itch, and if
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they be ever so slightly touch'd, Blood issues from them of a black or brown Colour, they are at last eaten away, and fall off by piecemeal, they are affected with a Weariness all over them, and Spittings, like a Salivation, do often attend them; also Convulsions, and many more Symptoms, do afflict them: In the Breast we meet with Complaints of Difficulties of Breathing, without any Cough or Stuffing, a Palpitation of the Heart, a Disposition to a Consumption, Spittings of Blood, and Faintings. In the Abdomen, or lower Belly, there are perceiv'd Pains of the Stomach, Loathings, Want of Appetite, Swellings of the Hypochondres, and violent Cholick Pains: Then are also observ'd Spots of various Colours, sometimes red, at other times blue, inclining to a Blackness, which often end in fordid Ulcers, or a Gangrene: Their Waters are often pale, or thick and red, and in many you may observe the Salts swimming and shining in the Water, which I do particularly remember to have seen in a Person troubled with a Melancholy; the Salts seem'd to be so many little Cylinders, that shone, and settled to the Bottom of the Chamber-Pot, of a bright crySTALLINE Colour; nor did he recover his Melancholy, till these Salts were abated by Evacuations, and were carry'd all off by Urine. The smallest Heat makes such Urine contract a Pellicule, nay, the very Warmth of the Air, by evaporating some of its aqueous Parts, causes a Crust to swim on
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the Surface of it, and such a Condition of the Urine argues that a vast Quantity of Salts do reign in the Mass of Blood, and such Blood must be dense. Now from the View we have taken of this Distemper, let us reason upon the Appearances: It in general may be granted, that a saline Acrimony is the efficient Cause of all the Symptoms, and, for the most part, it is a muriatick Saltiness, from whence the Blood erodes, and becomes dissolv'd thereby, and unfit for performing the Offices of balsamick and genuine Blood; it is, in short, Blood stock'd either with acid or volatile Salts, both of which are strongly concentrated, and become caustick thereby; the latter produces Bleedings and Spots, and the former generally first thickens the Blood, and produces obstinate Obstructions: It is to these two Qualities we owe all the Appearances above-mention'd. Practitioners that have hitherto spoke of the Scurvy, have endeavour'd to prove, that this scorbutick Salt is a volatile one, and they have supported their Opinion by the following Reasons; first, that if this Blood be distill'd, it gives out a great deal of a volatile Salt; next, that the Pains of scorbutick Patients do shift suddenly from one Part to another, and that the Spots also and Eruptions do so suddenly appear and disappear: But I shall pass these Cavils, and hasten to the evident Causes of the Scurvy; and I shall begin from the Air, which, as it is variously chang'd and deprav'd, does communicate

nicate various Faults to the Mass of Humours: A thick and cold Air is hurtful, inasmuch as it increases Phlegm and acid Humours in our Bodies, the Perspiration being greatly hinder'd thereby, and the Mass stagnating in many Places, grows sour, and gives rise to this Disorder; such Air also as is moist, hazy, and too much stock'd with nitrous Particles, by cooling the Lungs too much, and curbing their Exhalations, is a very frequent Cause of this Disease: Too much Heat does also add acrimonious Parts to the Blood, and therefore in warmer Regions, though distant enough from the Sea, does frequently produce the Scurvy, curable by Oranges: It is also certain that the Sea-Air has a great Share in causing the Scurvy. If we pass on to our Cookery, there we shall find a fruitful Field of Causes, which act by their Quantity and their Qualities; among the chief I repute Acids or Muriaticks, as also Stum, Verjuice, sour and austere Wines, cold Fruits, Pickles, and such like; then salt Meats, or such as are salted and smoak'd, as Herrings, Hung-Beef, and, in a Word, all Sorts of Sea-Fish, which as well the Vulgar as the better Rank of Persons feed upon: And it is not to be wondred at that the Blood should partake of the Nature of our Victuals, since it is evidently amended by them, if justly observ'd; and we have not more agreeable Alteratives than our Diet, because we swallow them down with Pleasure, whereas

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such as are taken from the Apothecaries Shops are swallow'd against our Inclinations; and in such as refuse Remedies, we have no other Method left us to work their Safety by: Next are Victuals that are tenacious, phlegmatick, and hard of Digestion; because these, by stagnating every where, do produce Acidities, and do contribute to produce obstinate Obstructions in the Bowels and Extremities, and as they are gross, they are unfit for breeding Spirits, or a just Circulation depending on their Quality and Purity: Sweets also do cause the Scurvy; because they contain a good deal of Acid in them; but one of our late Physicians has thought fit to cry up all Sweets, as most agreeable to our Nature of all other Food, not denying that Acidity, but declaring it to be harmless: He surely did not consult Health in this Advice, so much as the Advantage of a Set of Traders in those Commodities; for if we feed plentifully on any Diet, and it eminently contains certain Particles, why should he allow the one Sort of Particles to be useful, and deny the other its Operations? or why should he suppose that they never separate? That is; when Sugar is taken, we swallow a Body that contains a great deal of Oil, and of Acid also; but the Disproportion of these Bodies is very great: For eight Ounces of Sugar afford six Ounces of a weak acid Spirit, and but one of Oil; if then the Virtues of the Oil are cry'd up by this Gentleman, why does he not

allow that the Acid, and so much of it, could do harm? If these two Principles chance to be separated in the Blood, will not the Acid endanger Coagulations? Or if the Oils should be drain'd into the Gall-Bladder, and the Acids should be left behind (and this is possible) what Consequences are we not to dread from thence? Weak-sighted Men, that can see but one side of the Question! Sleep and Watching, exceeding their Bounds, do greatly contribute towards a Scurvy: For in such Cases the Blood is either rendred too acrimonious, or too viscid; in the one, the Blood is stuffed with a great deal of tenacious Matter, because the Muscles are at rest, and the Blood moves slowly in them, which Motion would send forward, therefore does the Blood congeal, and degenerate gradually into an acid Glue; hence do the animal Spirits become gross, and few are separated; hence the whole Mass becomes a Dough, and the acid Scurvy ensues: But, on the other hand, Watching renders our Juices thin and hot, and attenuates them; and then volatile Salts reign, and produce the Hot Scurvy. Motion therefore and Rest do cause the Scurvy, as Sleep and Watching do. As for the Secretions, if they exceed, or are deficient, they greatly disturb the whole animal OEconomy: If they are retain'd, an evident Addition is made, which depraves the Juices, and causes Obstructions of various Natures; thus Women, by a Retention of their menstrual Flux, and
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Men, by the Suppression of the Hemorrhoids, do both dwindle into the Scurvy, of one Kind or other: And, on the other hand, if they become immoderate, their Spirits are exhausted, the Blood circulates slowly, it grows sharp, thickens, stops, and breeds Obstructions, so that it requires nice Observation in every Person to know which of the evident Causes do us good or harm, to know whatever relieves or prejudices us in our Non-Naturals; and hence arises that trite Proverb, that, A Man is either a Fool or a Physician at Thirty; for at that Time he has certainly observ'd what agrees with him, or never will. Sadness and Frights do frequently breed the Scurvy; because they retard the Circulation. This Disease, in the Beginning, is not dangerous; because at that Time the Blood is not much deprav'd: But if it be suffered to lodge within us for any considerable Time, and if it be confirmed, then are the Blood, the Lymph, and Spirits, highly vitiated, the Bowels are tainted thereby, the Glands are obstructed, and it is a hard Matter to cure it, and even requires a Year's constant Application to root it out. However, it is certain that a hereditary Scurvy is much the most difficult to be cured; and, in general, from a confirmed Scurvy, Consumptions, Ulcers of the Lungs, Dropsies, Palsies, and grievous Gouts, take their Rise. As for the Cure of the Scurvy, as far as relates to Diet and the Regimen of the evident Causes, let the Air,

be clear and pure where the Patients live, let them remove far from the Sea-Side ; for that is generally foetid and saline ; let their Victuals consist of Meats of easy Digestion ; let them avoid salted, smoak'd, and sour Things ; let their Beer be well boil'd and hopp'd, or let it be medicated with Scurvy-Grass, Brooklime, Water-Cresses, Firr-Tops, Wormwood, Savory, Thyme, Marjoram, Rosemary, and the like, and let them avoid too much Sleep, Watching, Motion, Rest, and such Passions of the Mind as I have observed to be prejudicial ; and this may suffice for the Cold Scurvy. But if the Scurvy be Hot, then all Sours are conducive, as our common Sailors experience in the *Streights* and the *West-Indies*, where their Blood, by being exposed to so much Heat, is made too saline and acrimonious : Although I do not at all doubt but there is an Acrimony in some People, which will not bear sour Things ; and then it is safest to dilute well with fresh Water, or Water-Gruel, and in all Acrimonies whatever, Water-Drinking is certainly the most convenient ; because, should we be mistaken in the Species of it, we should do harm ; but as either is safely and conveniently diluted, and carried off by Water, it is always safest to rely on it, as a certain Remedy for either ; and even in Leprous Cases, Water-Drinking is one of the safest Reliefs we find, provided they refrain from Salt-Meats, Flesh-Meats, Sours, Wines, and fermented Liquors.

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Whoever seriously considers the Causes of violent Diseases, and compares them together, a *Fainting* may very justly be reputed one of the greatest that affects Mankind; since that divine Structure, more nice and accurate than any of the finest Machinery, the whole Man, found this Moment, is, the next, either dead, or in imminent Danger of Death: So surprizing a Disorder deserves our Notice. The *Græcians* call it a *Syncope*, which is calling it, a Cutting-off; because we rush down at once. It is, when all our Functions fail of a sudden; for in it the Pulse, the Breath, and all Sense and Motion, fail in an Instant. *Sennertus* treats largely on this Subject, and makes Differences of it; but as they all denote various Degrees of the same Thing, I shall pass them over, and only take notice of *Fainting-away*, or actual *Swooning*: Omitting therefore these Differences, which contribute little towards explicating the Nature of the Disease, I shall consider the Effects of this Disease and its Causes, which very often lie hid. The Heart is the second Principle of Life, and that Part which is first moved, and dies last of all; so that the Heart is the immediate Cause of Swooning, whatever be the preceding Cause, which sometimes resides in the Stomach, or elsewhere; so that the first Subject affected is the Heart, and the Secondary, the Bowels, or some other Part: Let us, therefore, examine the Symptoms nicely, that we may pass a better Judgment on the

Cause and Management of a Swooning. The Symptoms are, such as precede the Fit, and such as accompany it, and those which follow it: Those which precede are, a Coldness, that seizes sometimes one Part, sometimes another, and this Coldness does particularly seize on the spinal Marrow, and then it is the most hazardous, and they often die suddenly; it is also often preceded by a Yawning, Stretching, sometimes by a Heart-burn, sometimes by Convulsions, a Giddiness, a Ringing in the Ears, and a Dimness; it is accompany'd with a Privation of all Sense and Motion, and even the Breath and Pulse disappear, otherwise than in an Apoplexy; very often a cold Sweat breaks forth, and they let go their Excrements and Urine involuntarily, a Paleness seizes the Face, and whole Body, the Lips especially grow very white, and the Patients differ very little from dead Persons; for it is a Half-Death: As for those Symptoms that follow it, if they are not taken off, the Breath returns by degrees, the Heart begins to vibrate again, and the Pulse also returns, then the Patients come to their Senses, and open their Eyes, and they perfectly recover all the Functions, saving that a universal Weakness remains; what is most wonderful is, that Persons should, after such an Embargo laid on all the Functions, ever return to themselves by the Force of Nature: These are certain *Ænigma's* and Paradoxes in Nature, that the Spirits should all seem to be

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evaporated and waſted, which the ſudden Failure demonſtrates, and that they ſhould return, and begin, as it were, a new Life. An Impediment to the Motion of the Spirits, takes away the Motion of the Heart; and that Impediment being remov'd, is the Cauſe of the Return of Life. We are at a greater Loſs to know what reſtores, than what impedes this Motion: But that there does ſtill remain an Impulſe ſomewhere in the Veſſels, which is not immediately taken away. I told you, ſpeaking of the Signs that preceded a Swooning, that a Coldneſs was obſerv'd in ſome Part of the Body or other, which depends on a Ceſſation of Motion of the Juices in thoſe Parts; now as Motion impeded depends on ſomewhat retarding that Motion, let us take a View of what can arreſt it: Any Viſciditiy of the Juices ſtops their Hurry; for as they loſe their Fluidity, they loſe their Motion; viſcid Juices clinging every where, they ſtop every where in proportion as they ſtick, and therefore Coolneſs attends a ſlow Motion: How they become viſcid is eaſily conceiv'd, if we give Attention to the Juices; for, in advanc'd Years, Nouriſhment is not admitted into the furtheſt Recesses of the Body, be- cauſe their Fibres grow unfit for Action, and therefore the Juices have Leiſure to cohere; and where-ever they do, they contract an Acidity. The like, we ſee happens in Agues of all Sorts, where, at certain Periods, the Patients ſhiver, though plac'd in Stoves, which

demonstrates some very congealing Body mix'd with our Blood, and the Remedies and their Nature do evidently prove, that there is an Acidity reigning in our Vessels; such are fix'd and volatile Salts, and all Aromatics, and essential Oils, which being driven, by the Force of the Heart, into the remotest Channels of the Arteries, do stimulate the Vessels, and dissolve the Juices into minute Parts by dividing them, and restore the natural Thinness and Consistence of the Mass. I also observ'd, that a Heart-burn did often precede such a Coldness, which depends on some Salts, that stimulate and prick the Orifice of the Stomach in a troublesome Manner; for as the Stomach is not always full, the Stimulation must either depend upon these Salts turn'd into Steams ascending from the Bottom of the Stomach to the upper Orifice, or from these said Salts, which is most probable, twitching the Bottom of the Stomach, and propagating the violent Contractions begun at the lower Part quite up to the upper Orifice, which is beset with a great Number of Nerves, which, once they are put into an irregular Motion, continue their convulsive Contractions for a long Time: This Pain is very often join'd with Contortions and Anxieties, according to the Degree of the Contractions of the Nerves; as for the Yawning and Stretching, they proceed from Influxes into the Channels of the Nerves of the nervous Juices, and where the Muscles are drawn and convuls'd by those Nerves, there

there do they act: Hence Yawning is only an Influx of Spirits into the Muscles of the lower Jaw, and Stretching is the same Influx made into the various Muscles that are acted upon all over the Body; this may not be by an Influx, but by a Tremor, or Trembling, impress'd on the Coats of the Nerves from stimulating Parts lodg'd on the Origin of the Nerves, which Motions must be nicely distinguish'd, in order to judge of the State of Humours and Fibres: For in convulsive Motions, attended with Heat, it is most likely, that the Spirits, flowing out in a rapid Stream into the Channels of the Nerves, are the immediate Cause of the Convulsions; whereas if a Coldness attends the Patients, it is more than probable, that it is some pricking Body, that lodges on the nervous Coats, that produces them. And this is further prov'd from the Remedies themselves: For Convulsions, attended with Heat, are best remedy'd with Coolers, Diluters, and Opiates; but those, where a Coolness reigns, are best remedy'd with volatile Salts, and such other Medicines as are known to be diametrically opposite to Acidities. Whether this Observation has hitherto been made, I do not deny; but do not remember any explicate Mention made of it: Be that how it may, the Fact is true; which is all I aim at any where. When these Humours run into the Optick Nerves with Force, whether by an Influx or Stimulation, they cause such a Trembling there, as to cause
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a Motion of turning round, and so raise a Giddiness, or a successive Change of the *Retina's* Place: *A Dimness of Sight*, is only a Contraction of the same Nerves steadily continu'd, and there is no Wonder that Persons should not see, when the Nerves are straitned by their Contractions in such a Manner, as not to transmit their Juices, and then their Offices are not perform'd: *The Ringing of the Ears* is no other than a Contraction of the Nerve, that runs along the Membrane of the Ear, and shakes it; from whence a Sound arises: The *Slight Faintings and Failures of the Spirits*, are so many Interruptions that befall the Motion of the Spirits and the due Tension of the Nerves, from their Evaporation, or their Want of being produc'd, by reason of an Impurity of the Blood; because the Blood is thicken'd, its Motion is lessen'd, and there is too scanty a Production of them: The Pulse is weak in proportion; and hence this Symptom. A Difficulty of Respiration is felt; because when the Blood is thick, it sticks in the Vessels of the Lungs, and makes them stiff, and incapable of yielding to the Air's Pressure upon them. Having spoke of the Signs that precede a Swooning, I shall briefly take Notice of the Signs that accompany it; namely, an Abolition of all Sense and Motion, of all the internal, as well as external, Senses: As to this Affair, I have all along observ'd, that the Blood and Spirits, being rendred gross, do interrupt all our Functions: For as no

Action

Action can ensue from a total Cessation of Motion in our Fluids, the Patient must fall of Course to the Ground: This being evident, there is no Wonder that voluntary Motion, as well as the animal one, should be lessen'd, or abolish'd, in proportion to the Causes of it; that Respiration should cease, that the Pulse should fail, and that all the Machine's Motions should at once be arrested: If, therefore, there be Occasion for Spirits, which are not, nor can they be, supply'd from such gross and congeal'd Blood, their Offices cannot be executed by any other succedaneous Matter, and the Patient sinks for a while, or for ever, and the Respiration being a Dependant on the Pulse, this once ceasing, that must also cease; for all know, that observe justly, that the Lungs are made for this End, that they receive the Blood from the Heart, and by their alternative Contraction and Dilatation to send it forward into the left Ventricle. This Compression has the Effect of dividing the Blood into minute Parts, and to attenuate it: If then they fail of this Office, the Blood continues gross and thick, and is transmitted every where in the same Condition; and therefore the whole Functions fail: As to the cold Sweats, observ'd in the Foreheads and Breasts of fainting Persons particularly, they are plain Arguments of the Flagging of the Vessels every where, by which Subsidence the cold Juices are squeez'd out to the very Extremities, that is, to the Miliary Glands, and
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stand there in the Form of large Drops ; because, being gradually accumulated, they stagnate there. It is no Wonder that their Excrements and Urine should flow involuntarily ; for it is an Argument of Strength, when they are retain'd long enough ; there is a Failure of Spirits in the Sphincter Muscles in each Part, and the contractive Power of the Guts and Bladder overcome the Forces of these Sphincters, which is a Resemblance of what happens in the Skin, where, by the Flagging of the Vessels, Sweat is expell'd, and by the Flagging of the Muscles the Weight obtains over the Sphincters, and they necessarily flow forth. The Paleness of the Face and Lips arises from the Blood's not being transmitted to the extreme Parts ; the Lymph is driven thither ; but there is not a sufficient Thinness in the Blood to be sent thither : Hence the Paleness. This is evident in old Men and cachectical Persons, who, for the most Part, are pale, from a Quantity of Phlegm that predominates in them. If it were worth while, I could bring divers Examples and Reasons : but it is sufficient to have observ'd Things, lest I should exceed. Let us, in the last Place, take a View of those Symptoms which follow a Swooning ; namely, how the Heart and Pulse begin their Breathing again : This I look upon to be done in a double Manner ; either by Medicines, or by Nature's self : As to the effecting this by Medicines, it is easily accounted for ; but when

when Nature restores it self, it is not quite so easy to comprehend: But when the animal Spirits, which had fail'd in the Nerves moving the Heart, are detach'd in a sufficient Quantity from the Brain, where Motion is not totally destroy'd, so as to influence the Muscles of it, then does it again begin to act, and then also does the Pulsation return, then do the Lungs begin to play again, then the Blood, which for a while stood still, moves forward, and all our Functions are restor'd. Having thus explain'd all the Symptoms of any Order, it appears plainly and evidently to every one of common Reason, that I do not acknowledge any other immediate Cause of this Disease, than a Stoppage of the Course of the Spirits into the Heart, whether that these Spirits stop from any Grossness of the Blood, or from some Distensions of the Nerves, so that they lose their Elasticity for a while: The remote Causes of these Obstructions of Motion are, therefore, some Acidity, that, congealing the Juices, makes them unfit for the Generation of animal Spirits; or, some Acrimony, that has greatly dissolv'd the Blood, and causes such a plentiful Separation of Spirits, as that they obstruct themselves, by distending the nervous Channels too much, and hindring thereby their recoiling Motion; so that for a while the Spirits stand still: The Acidity is conjectur'd at in Fevers of the low Kind, and the Dissolution in those of the ardent Kind, in both of which we meet with either Swoonings,

ings, or, however, a small Degree of it, as in Faintings, and an Incapacity to Motion. There is a certain requisite Condition and Consistence in our Juices, that they should circulate regularly; which Consistence being thicker or thinner than usual, the Spirits will stop, by the Fault of the Juices or of the Vessels: Having determin'd the Manner of the Production of Swooning, it would be necessary to descend to the Management of such Persons as are subject to it; I do not mean whilst they are in the Fit, that Province belonging to the Gentlemen of the Faculty; but in order to prevent its Returns, we are to observe the different Symptoms and Constitutions that precede it: If, then, we find any one of a warm and dry Constitution, it is then necessary for such Persons to avoid all hot and warm Diet, to insist on Water-drinking, on cooling Herbs, such as Lettuce, Spinage, Mercury, and the like, and to shift into a cool Air, to use little Motion, to encourage Sleep, and to avoid all exasperating Passions of the Mind; but if, on the contrary, you find the Patients of a cool Temperament, and without Thirst, and often hungry, we must insist on a warmer Air, on a warm Diet, on Victuals high season'd with Pepper, and other hot Spices, or Aromatics, on Wines of the strongest Kind; they ought to move briskly about, to sleep little, and to be angry, but not sin: Because as the Blood is gross, and of

too solid a Consistence, as well as too sour, it ought to be sweetned, it ought to be attenuated, to be divided, and to be dissolv'd to that Pitch, which is convenient for Nature.

The *King's-Evil* requires our Notice as much as any other Disease whatever: For if we take a near View of human Life, we need not wonder why it is call'd miserable; since so soon as we are born, we are liable to so many Diseases. How many Disorders are poor Infants infested with? among the greatest of which I rank the King's-Evil, and all its Consequences. It is a Disease almost without Remedy, and particularly where it seizes on the Bones, which Surgeons call a *Spina Ventosa*: The Name is deriv'd from *Spina*, a Thorn, inasmuch as the acrimonious Humours are pegg'd into the Substance of the Bones, and there prick and corrode them. It is call'd by some, The Childrens Abscess; because it is so common in Children seiz'd with the King's-Evil, that few escape it, once the King's-Evil seizes them; and therefore I shall neglect any other Consideration of this Disease, save this Symptom of it. *Celsus* calls it, a Cancer of the Bone; because it is incurable any other Way, than by drawing out the Bone. It is, then, an Abscess of the Bone, upon, or near, the Joint: There is no Question but the Bones, like the Flesh, can be inflam'd and impostumated; for if we consider how tender Childrens Bones are, that they

they are almost flexible, and will yield to any Force impell'd on them, and if we also consider that the Bones have Vessels for Nourishment of them; if that Nourishment should chance to stand still any where, and extravase, and thereby become acrimonious, then does it at last contract such an high Degree of Sharpness, that the Bone will be corroded thereby. It will appear how true this is, if we conceive that Obstruction to happen near the Joints, which is the most frequent Seat of this Symptom; since the Protuberances have Cells proper to receive and lodge such Humours: Not but any Part of a Bone has a Structure too well fitted for such a Malady. The Differences of this Symptom, as they relate to the Accidents, are to be taken from the Fixedness of it: For when it proceeds from an hereditary Taint of the Parents, by their having been spoil'd with the Venereal Distemper, or from a confirm'd ill Habit of Body, or from a long Continuance, or from a very great Acrimony, then is it more or less malignant. I have heard it affirm'd from Surgeons, whose Province this Disease chiefly is, that their Iron Probes have been made so rusty, that they became useless to them ever after; which, I think, is an undeniable Argument of the acid Acrimony, that, by lodging, corrodes the Bone: Sometimes it turns fistulous, sometimes it is attended with Pain, and sometimes it is slow. This Disorder ought to be nicely distinguish'd from a Carious Bone, which

which two the unskilful are apt to confound : For although both these Distempers are produc'd from one and the same Origine, yet, for the most Part, the Acrimony in the Spina Ventosa is the greatest, or, at least, more extensive ; moreover, a Carious Bone betrays it self in the Beginning, so that it may more readily be cur'd : But it happens otherwise in the Spina Ventosa, in which the Matter seizes on the inner Part of the Bone, and corrupts it gently, till it spoils the whole Bone, before you know that any thing ails the Patient. Lastly, a Carious Bone often happens by bad Dressings apply'd to the Bone, particularly fatty and oily Medicines ; which does not happen to a Spina Ventosa, which proceeds from a Corruption of the whole Mass of Blood. There are great Disputes concerning the Cause of this Malady : Some imagine it to proceed from Steams of the Juices, which borders upon Antiquity too much ; for from whence do these Steams arise, but from the Juices ? Others, less antient, suppose it to proceed from a gross and phlegmatick Humour ; but these Gentlemen are in the wrong, according to their own Sentiments upon other Heads ; for from whence should these shooting Pains proceed ? According to them, they should rather be gravative and dull Pains : Phlegm, indeed, is apt to stagnate, and create Swellings any where ; but not such pricking Pains. A more probable and likely Cause, is an Acrimony ; and this is best prov'd by the Symptoms of

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the Disease, and this Acrimony is of the acid Sort, which congeals and thickens the Juices, and causes them to stand still: When it comes to this Pitch, then this Acrimony exerts it self, and gnaws the Bone to pieces. The Symptoms that are observ'd in this Distemper, and by which a Physician comes to the Knowledge of it, are various: In the Beginning it is not easy to discover it, because it lurks in the Body, and therefore a Physician may at that Time be mistaken; however, in Process of Time, the Symptoms are evident, so that a moderately discerning Person cannot be mistaken in its Discovery. It cannot be well wondred, why, at first, it is so hard to be known; because, as the Bones are hard, and want a Sense of feeling, or, at least, such as gives us notice of it, and as the Malady rises from the internal Parts of the Bone, there are no Signs whereby to discover it: But as soon as the Bone begins to swell, and to press upon its covering Membrane, then does Pain begin, and all the other Signs follow; first, Pain begins to prick the Parts, then a soft and white Swelling seizes on the Joint, either all round, or over the pain'd Part, and the Joint grows stiff, and is painful upon Motion: If the Pain be violent, and the Tumor large, a Fever ensues; at last it breaks, and pours forth an ichorous and stinking Matter; and if the Pains be violent, and the Running excessive, the Patient wastes away, and dwindles off with a Hectick, and Sweats, or Fluxes.

Pain

Pain cannot be wondred at, for the Reason above-mention'd ; namely, when the acrimonious Matter seizes upon the Periosteum, which, as all Membranes are, is very sensible, and at last corrodes it ; this Membrane is very tense of its own Nature, and being twitch'd by such corroding Juices, is not able to resist their Force, but they pierce it through by their septick Acrimony, and disfrange, and even tear it asunder : Whilst this is doing, the Idea of Pain must follow. This Pain is not always acute ; but as the Humour is more or less mix'd with Viscidity, it becomes acute, or gravative ; and in this viscid State, Children linger a long while under a sickly State. The next Symptom of this Case is the Tumor, which is higher or lower, as the Acrimony seizes upon fewer or more bony Fibres ; if many, the Tumor is large, and does not protuberate much, and then the Bone is spoil'd. The Skin is pale, as it is in all œdematous Tumors, where Viscidities reign : For in sanguineous Tumors the Blood it self is driven into the lymphatick Arteries ; whereas in these cold Tumors, the Force impelling is less, and therefore nothing, save the viscid Parts, without any Globules of Blood, are thrust into the Fibres. The Pain encreases upon Motion, which impels the acrimonious Parts deeper, and shakes the Parts together, so that they are rudely struck against each other, and therefore raise an extraordinary Trembling and Pain : And as in Wounds, and other

external Accidents, which tear and cut the Fibres; so here, the little pointed and double-edg'd Darts run through the Fibres, and prick and wound them forwards and sideways; and as there are large Numbers of these Darts, so must every Point of this Membrane be torn afunder; and then, as in common Tumors, the Matter fluctuates, and the Skin grows thinner, and at last breaks, and causes a fistulous Ulcer, which affords Matter for many Years, and is often incurable, as every Day's Experience shews. Thirdly, among the Symptoms I account the Fever, which is mild, or violent, according to the Causes that produce it: If it be violent, it argues a great Malignity and Acrimony in the Humours and Juices; and if there be little or no Fever at all, the Injury done to the Bone is little, and it will easily pass over: However, it seldom happens that such little Patients are ever without some Fever, which may readily be found out, by their Want of Appetite, and Thirst; the putrid Parts are communicated to the Blood, and put it into an excessive Motion; they are unfit for Nutrition; they are adapted to corrode and shave away the Fibres, but not to add any thing to them; and so long as the Blood is sharp and corrosive, it perpetuates this Fever, till the Matter, finding a Passage for it self, the Blood is not so much laden with it. Fourthly, we will consider why it turns fistulous; which happens because the Bones, at the Joint, being full of Cells,

Cells, and each pouring its Matter into different Points of the Flesh, the Matter has very different Directions, and therefore pushes into different Interstices of the Muscles, and so makes Coney-Boroughs, or Fistula's, in different Places: The Muscles being soft, and their Interstices many, do readily yield, and give Way to the Weight and Acrimony, and thus various Lodgments are made, and this is agreeable to our daily Experience, where Children, being timorous, will not admit of a Dilatation of the Orifices, and therefore Matter lodges, and acts, as sharp Salts will do, by corroding the Parts: There is Moisture enough in Matter to dissolve these corrosive Salts, and the Heat of their Bodies drives them into the Fibres; and thus all mischievous Effects ensue. Lastly, there ensues an ill Habit of Body, and a Leanness, or Wasting-away of the Body, which are standing Proofs of the Sharpness of all their Juices, and if they be reduc'd to a low Ebb, they generally are despair'd of: For how can any Good ensue from Blood that offends, as the Antients us'd to say, in its whole Substance? Or how can Patients be nourish'd by Blood that has no balsamick Parts in it? no smooth Parts in the Juices any where? Hence arise Fluxes, Night-Sweats, plentiful Secretions of Urine, and some other draining Symptoms, which carry off the little Patients, in proportion as they run. Having thus taken a View of the immediate Causes, let us see how the more remote Causes

contribute towards the Production of this Malady: The evident Causes are little dreamt of, and yet from them is the whole Mass of Blood corrupted; for if they contain any Acrimony, and be offensive in every Part of them; or if Errors be committed in Quantity, the Foundation is laid for this severe Distemper: Amongst the principal, I esteem the Diet of Children, which is the more dangerous, as it is the most common: For as Victuals of easy Digestion, and of proper Parts, are capable of being justly dissolv'd, and distributed around to the Extremities, without the Danger of growing thick or sharp, and the Children are properly nourish'd by such Victuals; so, on the contrary, Victuals and Liquors of improper Parts, of acrimonious and acid Particles, are never justly distributed, but are apt to stick every where, and to corrode the Fibres, even of the Bones. Thus, if Children are nourish'd by Nurses that are tainted with the Scurvy, the Pox, or with any other Distemper, where the Blood is sharp, the Chyle being sharp, the Blood and Spirits are of a like Nature, and then all is corrupted. Whence it appears, of how dangerous Consequence it is to Children, to have their Juices thus corrupted and tainted: For if ever this Disease is rooted, little Hopes can be given of their Recovery, since no Cure can be perform'd, without a total Eradication of the morbid Matter; and when the Bones are corrupted, how few of your little Children can stand the Shock of drawing

drawing out the corrupted Bones? For all the World knows what Fatigue Surgeons have in taking out Carious Bones: There is a great deal of Patience requir'd in the Surgeon himself; what must we say of the poor Patients, who are to suffer all this Pain? For Remedies we have none, that will correct the Corruption of the Bones in Venereal Cases; Salivations are of no Use to Carious Bones; they must exfoliate by Patience, or Fire, or Topicks: If this be true of a common Caries, what must we say of a Bone totally corrupted? For, since whatever becomes extraneous to Nature must be taken away, this is too hard for little ones to bear; wherefore they chuse Death, before such a necessary Cure. It is easy to see that the Diet of Children ought to be void of Grossness, Acidities, Salts, and too hot Things; and although Tea may be moderately allow'd to Children, yet too immoderate Use of it thickens the Blood, and endangers Disorders of many Kinds.

Sweats, being a wasting Disorder, deserve our Consideration. No one can deny that the Mass of Blood is highly necessary to preserve Life, and to nourish Mankind: That this Mass is not homogeneous is evident; because it contains many differing Parts in it, some of which are watry, others oily, others again saline, and the like; and if we examine it mechanically, we see it divides into oily, cheesy, and aqueous Parts. All these Parts are mix'd up together, loosely, into one Mass:

But in the Course of the Circulation, it is evident that these Parts appear in the different secretory Ducts; for Oil is separated by the Gall-Bladder, a muriatick Saline is in the Urine, that is, the volatile Salts are join'd to the Acids, which appear in the same Manner, as in the Distillation of Salt Armoniack, where the Acid joins to the Lime, or to the fix'd Salt of any Kind, and leaves the volatile Salt free to mount up; and so of all the rest: This Union of Parts, and Separation of the Parts join'd, as it is done by Nature it self, is natural; and thus the Glands of the Skin do afford a certain Secretion, which, by us, is call'd, Perspiration; whatever flows from thence besides, is reputed preternatural, and has some Cause within us, or without us, that causes a Secretion of watry Liquors, which we call *Sweat*: This Liquor is not, however, always mere Water; but Blood, or bloody Sweats have sometimes been observ'd, as may be seen in good Authors, and have been known in a certain Patient some Years ago near the Shore; and one Author mentions a young Woman, at the Time of her menstrual Flux, which had been suppress'd for some time, that voided Blood from the Pores of the Skin in the Head. As for these extraordinary Secretions, I shall say nothing of them; but shall confine my self to the Excess of Sweats only, which appear to the Eye to be nothing but Water that flows forth, but, upon tasting it, we always find it saline and bitter, and

it smells fetid and stinking, and in most things it agrees with the Urine in its Nature, as appears by the following Marks: For if a Person takes any Medicine to provoke Urine, and it does not succeed, these People sweat upon the least Occasion; and, on the contrary, if they take a Sweat that does not answer the End, they very often make a good deal of Water; then the Taste of both is saltish, so that they seem to differ in nothing but in the Place of Secretion. These Sweats are distinguish'd variously: For they are either copious, or saline, or bitter, or watry, or cold, or hot, or fetid; or they are critical, or symptomatical, according to the Advantage receiv'd, or the Damage done by them: Let us therefore look into the Causes of this Disorder, that we may the better know how to manage it. The following evident Causes do serve to promote it, namely, warm, and, at the same time, a moist Air, excessive Exercise, great Vexations of Mind, warm Liquors taken down in a plentiful Manner, or cold Liquor after Heats, warm Cloathings, and warm Remedies. As for other Causes, Fevers are the most common; at the End of every Fit, Sweats insue, and contribute to take them off; and very often the Sweats in them are prejudicial, more especially where they are particular; but in Fevers of any kind, Sweats are often symptomatical and dangerous: But it often happens that Stoves, Remedies, and an acrimonious Blood, are Causes

ses of Sweats; all which I shall briefly account for: In general, Sweats often ensue, whenever the Blood is so lax as to cohere but slightly, so that the Scum, which is saline, flows readily through the Pores. The Warmth of the Air has this Effect, inasmuch as it surrounds our Bodies, is breath'd into the Lungs, and is even swallow'd down with our Spittle; the Fire it contains rarefies our Blood, moves it briskly forward, and, dividing its Parts, causes a Separation through the Pores; for the Pores, being very minute, and only accustomed to separate invisible Steams, the Blood must be divided very minutely, ere it can be separated through them. It is plain, by Glasses, that there is Fire in the Air: The Sun, according to Sir *Isaac Newton*, is a Body of Fire, and it disperses its firing Rays every where. We shall now observe why Motion gives rise to Sweats: By it the Blood and Spirits are press'd forward through the Vessels, the Particles of the Juices are rarefy'd, and then, as we may say, they run over their Banks. As to the Passions of the Mind, it is certain, though inexplicable as to the Mode, that when our Mind is under any Agitation, the Spirits are detach'd plentifully into the Nerves and Muscles, as well as into the other Vessels, and we find an evident Acceleration of the Pulse; so that the Blood is divided, rarefied, and pushes out its thinner Parts to the Pores. Liquors of a warm Nature, or taken very warm, do irritate, or afford

ford Matter for Sweats ; Water it self, especially warm, dissolves the Salts, and then they, being dissolv'd, stimulate strongly at all the Emunctories, and more especially at the Pores, and Sweats insue. As for Liquor that is cold, and taken immediately upon Exercise, it has two Effects ; either it congeals the Juices and thickens the Blood, or the Heat of the Stomach is so great as to warm it immediately, without receiving any Prejudice, and then it has the same Effect as if it were taken down warm, and causes Sweats in the same Manner : Warm Cloathing keeps the Pores open, especially Flannel worn next the Skin, and encreases the Flux of Humours thither ; by opening the Orifices, and relaxing them, they grow wider, and consequently more runs forth : It is so evident that Flannel opens the Pores exceedingly, that when Consumptives wear it next their Skins, they grow excessively weak by the Expence of Perspiration : Thus much of the evident Causes of Sweats. We will now descend to the preternatural Causes of it, among the chief of which I shall mention Fevers of all Kinds. There seems to be an Assemblage of various Salts in the Blood of feverish Persons, or, however, the Salts seem to be somewhat acrimonious, and therefore is the Heart stimulated more frequently in them, and the Consequence of that Stimulation being a more frequent Circulation, and a Division of the Parts of the Blood, or a Rarefaction of it,

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the thin Parts fly off at such Passages as are made for them, and consequently Sweats are familiar in Fevers. Volatile oily Salts do also occasion Sweats, and are given in malignant Cases for this End; because these Diseases terminating in this Manner by Nature, it is an Encouragement to give them in imitation of Nature: By these Salts the Acids are corrected; the gross Consistence of the Blood is taken off; the Parts of the Blood are rendered less cohesive, and Secretions are regularly perform'd. The Reason of Sweats being sometimes particular, at other times universal, is to be sought for in the Blood's Constitution: For if it be well dispos'd every where, universal Sweats ensue; if only in some Places the Blood be well dispos'd, and the Pores sufficiently lax, then Sweats ensue: As for cold Liquors being drunk after Exercise, it is evident, if ever Men sweat after them, it is because the Fibres are then put into stronger Vibrations, when they are not injur'd; for as cold Liquors contract the Fibres, if this Contraction be sufficient, it puts all the Fibres every where into contractile and oscillatory Tremblings, from which a swifter Circulation ensues, an Attenuation of the Fluids, and a more frequent Arrival at the Orifices of the Glands, and consequently a Secretion proportionable: But where this happens once, it happens ten times, that Men suffer great Damages from drinking cold Water after strong Exercise; because the Fibres are greatly contracted,

tracted, and the Juices circulating are embarrass'd, and they inflame the Parts; hence come Pleurifies, Quinzies, and other dismal Disorders. As to fetid Sweats, it appears by their Fœtor, that they proceed from Salts highly exalted, and which dissolve the Blood into minute and thin Parts: Hence it is no Wonder that such Blood should escape, and fly off. In such Sweats they should remove into a cool Air; they should be at rest, and easy in their Mind; they should avoid Liquids of any Kind, and be thinly cloath'd: However, such Patients should only bare themselves by degrees; they should wipe off their Sweats with Towels, and their Diet should be glutinous and cooling Herbs and Food.

Convulsions deserve our Care, among the first of the Diseases, they being a Consequence of an excessive Motion of the animal Spirits towards the Muscles: For where a Nerve is cut, there can be no Convulsions. This Convulsion is made, when the Nerve throws in a great many Spirits into the muscular Fibres, which (and by the Juices also contain'd in them) are drawn up by an Approximation of the muscular and circular Fibres to each other, and so the Muscles are shorten'd: If one Muscle be contracted in this Manner, its opposite one will be let loose, or it would not give Way; and then there would be a tonick Motion continually. It is that Motion of the Muscles which is done contrary to our Inclinations; and the irritating Humours effect the

the same thing as the Command of the Soul; the Heart it self, tho' it is always in Motion, yet may also be convuls'd, as it is in Palpitations. This involuntary Motion of our Muscles happens from a copious Influx of the animal Spirits into the Nerves, whence they are shorten'd, and so are the Muscles that are ty'd to them: As to the various Manners of Contraction, namely, whether they be permanent or alternate, I shall omit them, as being little to my Purpose; as I shall, whether they be particular, or universal; because these do only shew a Difference in the Quantity of the Cause; but the Species of the Causes are the same in both. There is no Doubt that a Rigidity of the Fibres only does introduce this Disorder, if we consider the Affair seriously; and I make no doubt but that Apoplexies themselves are frequently occasion'd from a convulsive and permanent Rigidity of the nervous Fibres of the Brain; not only because we often find these to change hands, but because the Straitness of the Vessels contributes to stop the Blood. It is somewhat observable, that Convulsions are mostly periodical, and the Influx of the Spirits causing them, they are irritated to flow in periodically; from whence it may be inferr'd, that the Cause of such Fits does not reside in the Nerves themselves, but that it proceeds from elsewhere; that is, from the Condition the Blood is in: For all essential Diseases are continual and fix'd; and therefore this is not

one. Where they are universal, as in hysterick Women, their Senses are so benumb'd, as to feel nothing: But where they are particular, they feel an intolerable Pain; and spasmodick Pains are intolerable. As to the remote Causes of Convulsions, they are owing to the six Non-naturals: The Air introduces them by its Coolness; for as it then abounds with nitrous Parts, and either curbs Perspiration, or some useful Eruptions, it translates the Matter of these Discharges back into the Blood, and that affords Room for Irritations or Convulsions: In like Manner, all four Diet, as well as too acrimonious Victuals, mix'd along with the Blood and Juices, do raise them: Hence do we find hysterick Fits rais'd by Physick, sweet Diet, *Rhenish* Wines, Fruit, and the like. Suppressions, of all Kinds, cause them; because the Blood is rid of its heterogeneous Parts by the regular Flux of these natural or customary Discharges, and therefore it must be full of such a Mixture, by their unusual and continu'd Retention, as will stimulate the Nerves. Of all other Discharges, Frights have the largest Share in producing Convulsions: How often do we see the weaker Sex terrify'd into Fits and Diarrhæa's? In such a State the Spirits stagnate, and, like the Blood, grow acrimonious and stimulating, and all ill Events may be expected from such a Cause. It is not surprizing to hear of Persons struck dead by Terror: However, it is granted that the Weak only
are

terrify'd. Wounds, on nervous Parts, are frequently Causes of this Malady : And thus, when Surgeons, in opening a Vein, chance to wound a Nerve or a Tendon, the Person, so hurt, often falls into Convulsions. Pressures upon the Nerves have the same Effect : So in Children that are breeding their Teeth, we frequently meet with Convulsions, especially when they come to cut their Fore-Teeth, which happens from the Pressure below, and the cutting of the Gums ; for the Tooth, not finding a ready Passage upwards, presses and cuts, from both which the Parts are inflam'd, and the Pain increases, and puts the Childrens Spirits into great Commotions and Hurries : Besides the Nerve and Gums, the Membrane that covers the Bone is severely torn, and this adds greatly to the Malady : For, if what Anatomists tell us be true, namely, that this Membrane is only an Expansion, or an Assemblage of the Tendons of the neighbouring Muscles, then all those Parts adjacent are thrown into Tremblings in a violent Manner : If these Tremblings be all over the Body, the Person is thrown into universal Convulsions ; or if only some neighbouring Parts be put into these Motions, then Children flaver and cough, and vomit up the Contents of their Stomachs, or loath their Victuals. Surgeons do often meet with Convulsions from shatter'd Bones lodging on the Tendons or Nerves, or even on the Muscles themselves. Where-ever, then, such Causes

as I have mention'd, obtain; a narrow Inspection must be made, and having found out the Causes, they must be artfully remov'd: In general, the Diet fit for Persons under Convulsions, should be such as will hinder the too swift Motion of the Spirits; and therefore Convulsives must be fed with watry and farinaceous Diet: Hence, perhaps, it is, that as soon as Women perceive they are going into an hysterick Fit, they call for a Draught of Water mix'd up with fine Wheat Flower; for this allays the Hurry of the Spirits, and clogs their irregular Motion, and either puts off a Fit, or shortens it: This Procedure is regular; and they have, doubtless, been taught it by some Persons of Skill.

Where the *Menstrual Flux* becomes immoderate, and wastes the Strength of Women, it is incumbent on us to examine into its Causes, some of which are evident, others more remote: The evident ones are, first, the Air that abounds with very hot and acrimonious Parts, capable of rarefying the Blood, and of introducing attenuating Parts into it. Our Victuals and Drinkables do most eminently share in producing this Distemper: For in acrimonious Diet and vinous Liquors, there is a great deal of Acrimony heap'd up in our Vessels by a plentiful Use of them; since we are nourish'd by what we take, the Blood must partake of the Qualities of Diet. Violent Exercises and all Motion are known, by every Day's Experience, to strain, and even

break the Vessels, and to produce large Effusions of Blood. The Passions of Anger, particularly, do greatly move the Blood forward, and do rarefy it to a great Pitch; so that the tender Vessels are overcome by Distension, and break: Excessive Feeding it self, though there were no Acrimony added, stretches the Vessels, and cracks them. The immediate Cause, then, of bleeding at the Womb-Vessels is, an Aperture made there by some of the foregoing Causes; and whether this be done by Distension or Breach, is best known by the preceding Causes, and Difficulty of Cure. If a Fulness occasions this Malady, it is easily known from the Fulness of the Vessels of the Hand, and elsewhere: If it be occasion'd by an Acrimony, the Pulse is quick, great, and strong; there is a Heat in the Body more than usual; a Thirst; if there be any Pain in the Passage; and upon their Secretion. It is not easy to determine, how much each Woman can bear of this Discharge, or how much Blood she should throw off monthly: But we may readily judge of their Excess by the Decay of Strength, by the Swoonings and Dropsies ensuing, and the like. It is a Disease of a dangerous Consequence, and, if it attacks old Women, Physick has not any Remedy equal to it; because in them the Vessels become so rigid, that Drugs have little or no Effect upon them; having shrunk, they do not readily unite, as I have often experienc'd to my Surprise:

But

But in younger Persons, astringent, and glutinous Remedies, have a full Power to purse up their Mouths. The Diet to be observ'd by such Persons ought to be gelatinous and restraining: Hence, Clarets of any Sort, Jellies, Calves and Sheeps Feet, are good and convenient Victuals. By what I have said above, it is evident that all Sorts of Excess in Wine, Ginger, Peppers, Mustard, Garlick, Onions, Brandies, and the like, are prejudicial; Salt it self is too irritating; Barley-Gruel, Milk-Meats, Almonds, Endive, Sorrel, and the like, are convenient; and every thing that has a Tendency to move the Blood, to dissolve it, and thin it, must be forborn: And as too much Nourishment, as I have made you observe already, fills the Vessels, they ought, at the Time, to feed sparingly. One Thing more I must remark, which is this, namely, that the Posture contributes extremely to this Flux: For when Women sit up, the whole Weight of the Blood presses upon the Extremities of the Arteries; and supposing no other Error were committed, yet this one is sufficient to frustrate all your Endeavours in the Cure: And yet lying in Bed is not safe; because, where they are cover'd, they are apt to grow hot, and, perhaps, sweat too, neither of which are convenient; because we are to keep the Blood's Motion as sedate as possible: Wherefore an horizontal Posture, upon a Couch, without any weighty Cover, upon one Side, not upon

their Backs, is the best of all; because the Inconveniences mention'd, are all guarded against.

Among the Crowds of Diseases that afflict Mankind, the *Small-Pox* requires a nice Management; and therefore I shall in few Words give a Detail of the Nature of this Malady, in order to clear up the Sort of Diet, that ought to be made choice of in it: Whether they were understood by the Antients, or not, is an useless Discourse, and a Piece of History little to the Reader's Purpose. I know *Lommius* * calls them by a Name which was us'd among the Antients: But whether they and he us'd that Word in the same Sense, will bear a Dispute of as great Consequence as other Parts of our Histories of Physick are, or can be of. There is a Fever for three or four Days, that precedes an Eruption, greater or smaller; and these Pimples run the very same Course that a common Itch does, that is, they break forth in small Pimples, grow red and larger; they turn into Matter, of various Colours, according to the Degree of Acrimony in the Blood and Juices, and then they scab, and fall off: The Fever that preceded, ceases upon the Eruption, if the Matter of the Pimples be free of Acrimony, and be few; but if its Acrimony be great, and the Matter not laudable, there is another Fever that

* ἐξανθήματα

accompanies their Throbbing, which is an inflammatory one, and a third attends the Ripening of them, which is a *putrid* one, from a Resorption of the Matter: So that from all these different Fevers, which, if I were more more at leisure, or if it were serviceable to the present Design, I could pretty evidently make out; the first Fever is *depuratory*, and is rais'd from the Acrimony stimulating the Heart and Arteries, and being thrust out, by the Force of the Circulation, from the Blood-Vessels, it takes its Course. There is an observable Remission in the Fever after Eruption, even of the worst Kind, and, till the Pimples all over begin to be painful, and throb, the *inflammatory*, or *symptomatical* Fever does not commence in earnest; and I think it is easy for any Practitioner to distinguish this Fever from the *putrid* one, which is also symptomatical, by the Symptoms that characterise these two, from each other: But as various Tendencies of these Fevers, and of the Eruption, do often thwart each other, it is not much to be wondered at, that Patients are hurry'd so suddenly off. It is a Business that will employ the nicest Judgments to come but tolerably off: But when the Management is left to Chance, or to what may justly be reputed worse, the Expectation of Life must be very precarious, where the Number of Chances is so small. I shall not take upon me to determine what Species of Acrimony reign in the Blood; how-

however, we may partly know by the Colour of the Matter contain'd in the Pimples : For where the Matter appears of a greenish Colour, and the Scabs are whitish, it is a shrewd Argument of an Acidity : There is a strange Propensity in this Matter to settle about the Face and Head ; and where the Face is loaden with Pimples, the Head is generally seiz'd also, as appears by the comatous or sleepy Symptoms that accompany this plentiful Eruption ; so that Physicians do greatly observe whether there be many on the Face, and do take many of their Prognosticks from thence. I shall not dispute whether there can be assign'd any mechanical Reason for this Eruption on this Part, or no : But it may happen upon the same Account that we see heavier Bodies to run to the upper and furthest End of a revolving Siphon ; and as Salts do appear to reign in the Small-Pox, from the Ravage they make on the Skin, where certain Signs of Septicity are seen and discover'd by the naked Eye, the Earth they lodge in gives them Weight enough to entitle them to be called the heaviest Bodies of our whole Mass of Juices ; and this may, perhaps, be as tolerable a Reason as can be given for this Affair : However, I shall accept of any better, when fairly propos'd. I make no doubt, but the Pores of the Face, being daily expos'd to the cool Air, have a Rigidity given them, that resists the Motion of the Fluids passing that Way, and transpires

pires fewer Steams than other Parts; and this may be another Reason, why the Face is more loaden. But the Management of their Diet being my chief Aim in these Sheets, I shall descend to some Observables that will guide us in its Choice. The Fever is sometimes slow; and at other times it rages greatly before the Eruption: This Fever depends on an Acrimony that dissolves and agitates the whole Mass of Juices, and which, encreasing the Blood's Bulk, causes a Distension in the Vessels, and Pain must ensue where the Vessels press upon the Membranes; that is, in the Head and Back: A Redness of the Face, is no other than a greater Distension of the Vessels of the Face, from whence the Blood runs into the Capillaries; the Difficulty of Breathing, which is often very great before the Eruption, is but the Inflation or Dilatation of the Blood-Vessels of the Lungs, whereby the Air-Chamber is lessen'd, and less Air can be drawn in than formerly; that is, the Lungs resist its Entrance, and fall forcibly down again: These, and many more, arising from the same Cause, on different Parts of the Body, destroying or lessening their Functions, are worth Notice. The more regularly the Pimples appear, the greater Hopes are there that the Blood's Acrimony is small: For where they appear later than the fourth Day, it is just to conclude, that there are fewer Spirits separated than there should be by Nature, and that there is a preternatural

Viscidities in the Juices that hinders this Secretion of them: From whence it will follow, that the Blood's Motion is too slow, and incapable of throwing out that extraneous Matter which *Morton* calls *Poison*; but where this Expulsion is earlier than the fourth Day, then is the Blood too much hurry'd on, and Spirits are secreted in a more large Proportion than usual; here the Blood's Consistence is dissolv'd into a Putrilage, and sometimes does not cake at all, when let out of a Vein, or thrown out by Bleedings. This latter Case is a plain Argument of an alcalious Acrimony. Either State, preternatural to any Pitch, bodes danger: Because, through the whole Stages of the Inflammation, the Physician is either spurring or biting; he is either bleeding and cooling, or blistring, and giving warm Cordials; and if he can, by his painful Industry, keep the Juices moving on, and give them a due Consistence, it is odds but he gains his Point at last; and, if he fails, who can wonder? Torrents will overwhelm Castles! I have said so much as to lead my Readers into the Diet and Regimen proper for their Sick: In general, Warmth is necessary to soften the Skin, and force the Matter lodg'd to run its Stages over with greater Safety: Wherefore, let the Air of the Room be inclining to Warmth, that the Pores may be open'd, and that the Matter dispatch'd to the Skin may not be repell'd, which would be of ill Consequence; and also that the Pimples may

may be capable of receiving all that is proper for their Encrease. Their Diet must be ever thin and plentiful: Because the Acrimony must always be diluted by watry Liquors, and a gentle Warmth of the Liquor dissolves the Grumes of the Blood; and they should be taken with a plentiful Hand; because the Salivation will go on more regularly thereby, which, in the dangerous Sort, is often curb'd for Want of a due Consistence: I therefore advise Gruels, Sack-Whey, and Emulsions, for ordinary Liquor. If there be a great Heat attending them, we must take care to avoid too strong Things: But if, on the contrary, there should be a Defect of Heat, then are you to mix Wine along with all they take, to excite a just Motion in the Blood, and to give them Life to support the Pimples, that nothing may retire into the Blood, and taint it, which is frequently so sudden, that the Patient you left in a hopeful Way, is carry'd off before the next Visit. All salt Things, or spic'd Meats, are improper: The Blood is already too much loaden with Salts; our Business must be to wash them out of the Vessels. Sleep is a desirable Blessing: What with Throbbings and Pressure of the Pimples, this can hardly be obtain'd; and therefore Opiates become highly necessary through the whole Course of this Disease, save the Time preceding the Eruption. How far we must encourage Stools, is much controverted among the Learned; whilst some plac'd a
great

great Part of the Cure in Purgatives themselves, till they were terrify'd by the Number of ill Successes, and others, on the other Hand, are very heedless of this Discharge, dreading every Stool to be a Forerunner of a Flux: However, as Nature ought to answer every Day, the same must happen here, and, if she is sluggish, ought to be promoted by a Glister, or a Suppository; and as all Ranks of Practitioners cry up the good Effects of Opiates in this Malady, there can be no Apprehensions of a Flux, where they are every sixth, eighth or twelfth Hour oblig'd to give them to their Patients.

Having run through the *Kitchen-Physick* and Management due to some of the principal and most frequently occurring Diseases, and also having shew'd you the Use of most Materials us'd in our Diet, and how to avoid Sickness, as well as how to manage it in Families when they are attack'd, I hope I have done an agreeable Piece of Service to the Publick, and beg leave, for the present, to lay down my Pen, and wish all Success to my kind Readers.





T H E

I N D E X.

A

Ægyptians, how they manage in Southern and Northern Winds 6

Agues cur'd by the Bark; a Receipt for one 7, 85, 94, 118

— When to begin to give the Bark in them 7

— Why so common in the Fens of Lincolnshire 8

— The cold Fit, what to do in it 117

Abuse of good Things to be avoided 27

Absent Physicians, a Mistake in consulting them; how this must be done 47

Asses Milk, Sham 57

Asthmatick, bad for 63, 74

Acrimony, how to temper 63, 72

— increas'd, how 324

— cause Cholera's 362

Appetite, to help 70, 71

— destroys, what 78

— lost, how 355

Attraction, how it prevails in Plants 70

Anodyne, what is 73

Aperient, what is 77, 110, 132

Anti-Asthmaticks, what 79, 113, 132, 151

Attenuants thicken the Blood, and how 102

— What are 104, 154

Anti-Acids, what are 108, 143, 174

Anti Hystericks 110

Air, which is good in Women with Child 174

— causes a Dropsy 257

— enters our Stomach 274

— does great Good or Hurt 295

After-Pains, what they are, and how caus'd 180

— how help'd 184

— whether to be help'd, or no *ibid.*

After Burden stays, why, and how known, from what Cause, and how remedied 181

Alteratives pass into the Blood 193

Accidents, from Bleeding, how prevented 202

Acids, how they are bred in Bodies 221

Arteries, whether to be open'd, and which 235

Arteries,

I N D E X.

- Arteries*, in opening one, how many Things are to be regarded 236
 —Capillary, why and when they swell 290
Apoplexy, from Passion, how it happens 268
Anger, its Effects 177
 —causes Frenzies in an Instant 292
 —what it does with our Spirits *ibid.*
 —moves our Juices 370
Aversions, to be chiefly regarded 285
 —to useful Things, an unhappy State 122
Advantages must guide the Patients 285
Appeasing the Blood, is appeasing the Spirits 293
Artful Management of an old Physician 294
Anxiety, what it is 310
Acidity, a Cause of Swooning 392
Abscess of Bones, whence 401
- Bleeding* 196 B
Bitters, when to be given 35
Bitters and Milk agree in acid States, mix'd together 117
Blood, long retain'd, grows sharp 49
 —its Course, how hasten'd to any Part 199
 —when not to be drawn *ibid.*
 —extravas'd, how caus'd 203
 —does not always stagnate in Inflammations; but moves slowly 208
 —runs freelier to the Orifice 213
 —made gross, how 260
 —never congeals in Pestilential 306
- Blood* made up of many Ingredients 315
 —congeal'd, how to dissolve 316
 —balsamick, when 350
Boerhaave's Advice in Health 51
 —on Sourness 93
Barley good in Fevers, salt States, astringent, good in feverish States 57
 —in Poultices good 58
 —when fermented, how it operates, and what Effects it produces 59
 —in Loosenesses, what Effects 60
Bread, new, its Effects *ibid.*
Beans, not so windy as Pease 65
 —however, they raise Gripes *ibid.*
 —how to correct them when hardest of Digestion 66
Breast, hurt by Acids 68
Bile, how to correct 70
 —corrected by Acids 309
Binding, what is 71
Balsamick, what is 78
Bath, a Quære concerning its Waters 139
 —its Virtues 140
 —bad in Asthma's 141
Brandy, how it recruits, but dispirits afterwards 144
 —promotes Bleedings 267
 —prejudicial in Pallies 333
Bleedings, cur'd 160
 —good in Women with Child 171
 —effectual in Pregnants 173
 —effectual always, how 197
 —whether it hurts in Inflammations 207
 —proper in Inflammations from

I N D E X.

- from other Causes than Plenitudes 208
 - Bleeding* changes the Motion of the Blood, and checks its Violence 209
 - in Inflammations, necessary 210
 - divertive, whether there be any such thing 216
 - allays Tumults *ibid.*
 - prevents Ruptures of the Vessels 217
 - good in Burning Fevers 218
 - does not eradicate Fevers *ibid.*
 - how determin'd 219
 - when to do it in Fevers *ibid.* 229
 - hastens the Blood's Motion 224
 - useful in Passions just begun 225
 - bad in Hystericks, and not to be done in the Fit *ibid.*
 - when of use in Flatulencies 226
 - good for Symptoms 227
 - what it relieves 228
 - interceptive, whether such 229
 - its Rules 230
 - large in Plenitudes 231
 - in the Foot, not to be done *ibid.*
 - prevents Miscarriages *ibid.*
 - in periodical Diseases 232
 - what Time of Day best done 233
 - what Quantity *ibid.*
 - how to avoid Calumny in it *ibid.*
 - from Spirit of Wine 269
 - Bleeding*, how to help with Kitchen Physick 269
 - good in Phrenzies 293
 - Big bellied Women*, their Diet et 167
 - Baths*, bad for Bleedings 268
 - Buboes*, what and whence 319
 - how prevented 321
 - Broths*, wholesome, and why 51
 - Bellini*, his Observation on flatulent Blood 227
- C
- Custom* degenerates into Nature, &c. 4, 157, 168
 - Custom* in France and England 82
 - Consumptions*, fatal to the English 7
 - how to prevent 54
 - from South-West Winds, their Progress *ibid.*
 - what us'd in 67, 78, 80
 - what, various, Seat, Differences, Beginning, hereditary, Signs, curable, or not, Causes, Contagions, &c. 345, to 356
 - Coughs*, what us'd in 67, 78, 80
 - Cramps*, what us'd in *ibid.*
 - Cachexies*, frequent in rainy Countries 8
 - how they are cur'd, &c. 88, 147, 154
 - Cisterns*, for containing Rain Water in 19
 - Cool Things*, how they are prejudicial 26
 - a Caution on them 70, 71, 77
 - Cold*, Observations upon it 88
 - whether it be somewhat positive 90
 - Corpulency,*

I N D E X.

- Corpulency*, how it is to be cur'd 29
 —incurable in Old Age *ib.*
Costive People, what to avoid 32
Children, why they die of Convulsions 35
Children, how they are nourish'd, and whether there be any Coat for their Urine 185, 186
 —Change of Circulation in them 187, 189
 —make no Water —when to be fed 190, 191
Colicks, upon Exercise, how to be manag'd 44
 —occasion'd by what 65, 70
 —good in 95, 143, 149, 150, 151
Constitutions, to be mainly regarded 46, 124
Coals, their Smoak prejudicial in Consumptions 55
Corrosion, how to prevent 56
Changes, if sudden, are dangerous *ibid.*
Costiveness, how to remedy 96
 —in Women with Child, how help'd 173, 185
 —whence in Child-bed Women 180
Choler, to correct 72
 —to dilute 82
 —its Concomitants 217
Convulsions, occasion'd 79
 —with Heat, how 393
 —what, how caus'd and cur'd 413, &c.
Cloves; how to restore their lost Smell 98
Cordial, what is 110, 130
Coffee, longr oasted, is useless 110, 126
 —its Principles 106
Camphire, if, and how, it hurts Venery 102
Cures are done by Contraries 123
Critical Swellings, what good for 125
Chymistry has its Use in Reasoning in Physick 139
Chronical Diseases help'd 140
Chocolate, a Medley 142
 —which best 143
Clarets, how to hinder their Astringency 147
Cleansings, what they are, and why they happen, too many, or too few, what to be done 182
 —stopt by Cold, &c. 271, 272, 273
Chyle, when it appears in the Blood 194
 —whence it is viscous 258
Carbuncles, their Cause 310, 322
Cake of Blood, what 315
Cholera, what, whence, Kinds, Symptoms, &c. 356, &c.
Corrupt Bones, not cur'd by Remedies 407

D

- Dispositions* of Mind are often communicated to us from the Place we reside in 2
Diseases Endemical, how raised 6
 —attend the Seasons, which, if certain, the Diseases are so too 10
 —are not always immediately bred 11
 —of the Drinkers of Snow Waters 14
 —of the Seasons, how to prevent 31

I N D E X.

- Diseases* are not the Result of
a sudden Cause; for they
creep on gradually 48
—in Children, whence 170
Dropsies arise from external
Errors mostly 7
—frequent in rainy Coun-
tries 8
—how those caus'd from
Wine, and those from
Wine and Water, differ
from each other 23
—when they ensue 28
—when they happen after
Drinking 44
—Diet proper for them 77
—what is good for them 84
—why they are bred 148
—whence they spring 257
—from Brandy, how 258
—from Temperance, how
bred 259
—who most, who least li-
able to *ibid.*
—from Obstructions, and
how 260
—from Evacuations, and
how 261
—how to avoid 262
—Drinkables to be avoided
in them 263
Defluxions, subject to, what
to do 9
—on the Head 134
—help'd 159
—are a common Cause of
Consumptions 350
Dog-Star, no Reason for a-
voiding Remedies 11
Drink, how to regulate its
Quantity 24
Digestion, how perform'd, and
its End *ibid.*
—when it is best *ibid.*
—if ill, how to be manag'd
42
—what hurts it 72, 132,
148
Diet, windy, what is, and
why it is 25
—must be opposite to the
Constitutions 33
—in the Gripes 38
Diet, of one Sort, can't suit
all People 41
—its Nature is to be
known 57
—improper, by whom
us'd 75
—how abus'd 162
—of Women in Child-bed
176
—*for Indigestion* 275
—*which disposes our Blood*
to be inflammatory 292
—proper to prevent Ma-
lignity of the alcalious
Sort 326
—simple, best in disorder'd
Stomachs 33
—in Pleurisies 376
Death, when most common
49
Drought, its Effects on our Fi-
bres 56
Diuretick, what is 71, 72, 73,
100, 111, 129
Deobstruent, what 73
Debauches, in Liquor, how
help'd 83, 133
Drunkennes, how to prevent
it 100
Dentifrice, what 108
Digestive, what is 111, 133,
148, 150
Drowsiness, in Fevers, how
help'd, and why 117
—happens from volatile
Salts, and why 319
Discutient, what is 130
Dispiriting, what is 137
Dioscordium, its Virtues 166
Derivation, when to be us'd,
when not 215
Distempers, how to judge of
285
Difference

I N D E X.

<i>Difference</i> of Matter spit up in Pleurifies 366	<i>Elastick</i> , how they are preju- dic'd, and for what Reason 119
<i>Difficulty</i> of Breathing, whence 372	<i>Eyes</i> , when they are inflam'd, how they are dispers'd, and why <i>ibid.</i>
<i>Dimness</i> of Sight in Swoons, whence 374	<i>Ears</i> , when they are inflam'd, how they are help'd, and by what Means <i>ibid.</i>

E

<i>Effects</i> of Servitude and Free- dom 3 —follow their Causes 28 —of Ice and Snow on our Blood 53 —of Opium, what they are, and how they hap- pen 158 —of Anger, what they are 177 —cease, upon taking away their efficient Causes 228 —of Carbuncles 322 <i>English</i> Constitutions, what they are 12 <i>English</i> Method of preparing Opium, is the best of all others 164 <i>Eating</i> , its Quantity, how regulated 23 <i>Eaters</i> , generally lean, and why 24 <i>Exercise</i> , good in some Fluxes 41 —necessary, upon high Feeding 46 —what it does and per- forms 283 —heats 369 <i>Extraneous</i> Bodies suck'd in by the Air 55 <i>Emeticks</i> , what they are, and how they operate on hu- man Stomachs 86 <i>Effeminate</i> , how Men become so, and what is the Rea- son of it 108	<i>Examples</i> of curing by con- trary Remedies, and why we proceed so 123 <i>Excess</i> , whether in Politicks, or in the Art of Physick, is always a Crime 138 —is always dangerous 260 <i>Embraces</i> , if Men are weak- en'd, how they are reliev'd, and why 144 <i>Epilepsies</i> , or Epileptick Dis- orders, how they are re- medied, and why 159 <i>Extravas'd</i> Blood, how help'd 203 —is not at all help'd by Bleeding 210 <i>Elective</i> Purges, whether there be any such in the whole Materia Medica 244 <i>Evacuations</i> stop the Menfes 281 <i>Earths</i> swallow'd down do stop the natural Course of the Menfes 282 <i>Excrements</i> flow involunta- rily 396
--	--

F

<i>Fortitude</i> of Mind and Body are to be acquir'd by En- deavours 3 <i>Fat</i> , how it is to be acquir'd 29 —what it is 103 <i>Fat</i> People, how they are to be made leaner 31 <i>Fattening</i>
--

I N D E X.

- Fattening* Things, an Observation 78, 146
Fattening Diet, what 67, 137, 142
 —artificially made 78
Fatness is not to be procur'd where there are Obstructions, and why 145
Fulness at Stomach is best reliev'd by Vomits, or Physick 34
Frights are not always the Causes of Convulsions 36
 — their Effects 177
 — stop Womens Cleanings 271
 — produce Swooning 282
 — in malignant Cases do seldom fail of being fatal 314
 — clog our Spirits 370
Fears, in Anxieties, whence 311
Fatigue can be better born at one time than another 49
Fluids too moveable, or too sluggish, what happens from them 52
 — run the faster to the Part where an Orifice is made for their Passage 62
 — how to push on 289
Fluid Blood does not rarefy 311
Faults in Ptilans, how they are corrected 58
Fermented Bread, its Effects 60
Ferment of the Stomach, spoiled by gross Victuals, and why 300
Fluxes, their Causes 70
 — what occasions 71
 — to cure 76
 — to help, and why 113, 116, 143, 159
 — in Fevers, whence they proceed 310
Fluxes, in Consumptions, whence 355
Fevers, their Causes 70
 — what is good in them 72, 136
 — their Violence, how guessed at 306
 — decrease in Winter 324
 — slow in Consumptions, whence 354
Feverish Colds, a Caution in them 165
Fætus, to promote its Expulsion 75
Frozen Parts, how to cure, and why 89
Flushings, from whence they proceed 94
Faintness, help'd 144
Fainting, in Consumptions, whence 355
 — in Cholera's, whence 362
Fertility, how to help 149
Flatulencies, whether they be a Cause of Diseases 226
Flatulent Blood, Bellini and Helvetius's Opinion concerning it 227
Family Physick, what so call'd, &c. 248, 249
Fuller's Meaning, when he advises Exercise in Fluxes 276
Fasting produces Swooning 281
Fire in the Air, what it does to our Juices and Spirits 289
Frantick People, how they are to be managed 294
Fixt Salts better than volatile Salts, for Acidities 324

I N D E X.

G

- Gout*, how to manage it 31
 —what proper for it 111
 —and Gravel, how they are helped, and why 135
Glutinous Nourishment, what Distempers it is bad for 60
Gravel, what is good in it 111
 —how it is occasion'd, and how it is remedied, or, at least, prevented 136
 —how it is suspended in our Juices, and from whence it proceeds 287
Ginger, when and where good 152
 —opens Obstructions of the Nerves *ibid.*
 —opens Obstructions of the Menfes *ibid.*
 —when it is to be avoided *ibid.*
Good Livers may take much Blood away from their Veins 232
Good Signs in a Palsy 343
Grief, what Prejudice it does to the Nerves, and what happens to the Blood, Spirits, &c. at the Time this Passion lasts 261
Grossness of the Blood always produces Jaundices, from what Cause soever this Grossness proceeds 270
Gall, how it is hindred from flowing into the Gall-Bladder and the Intestines 271
Glisters, a convenient one 286
Globules of the Blood, when they are too thin, and distended to too great a Pitch, do break 290

- General Notions* on Males and Females, and their Difference as to their Constitutions 299
Glands, the conglobate, why they are oftener affected than the conglomerated ones, and where this appears very evident 321
Guesses, to know whether a Consumption be hereditary, or not 347
Guts, how many Ways Humours can flow from them 358

H

- Health*, Rules to be observ'd in it 1
 —how to preserve it for a long Time, and to a good old Age 30
Habits bring on a Necessity 4
 —of Body that are cool, how they are prejudiced 77
Hunting, hurts Procreation 5
History, natural, of Waters, of Places, and Towns, deficient 15
Hysterick Headaches cured by Sternutatories, or Blisters 45
 — Women, what is bad for them 79
 — what they can bear, what they cannot bear 121
 —Fits, how cur'd 160
 — Passion, the Signs of 296
 — in all States of Blood 298
 —Disease has no particular Seat 303

Hystericks,

I N D E X.

Hystericks, how they are to be managed as to their Diet, &c. 304
Hypochondriacks, by what they are prejudiced 67
 —what relieves them 111
Hoarseness, how to help 69
 —how cured 87
 —whence it arrives 88
Hot Blood, good against it 71
Heat changes our Juices, and in what Manner it does this 290
 —whence it proceeds in malignant Fevers 316
 —if great, or small, whence 317
 —causes Epidemical Fevers, and how 325
Heating, what is properly such 104
Hot Radishes are too hot, and how to correct them 74
Hectical Cases, how to help 114
 —advantaged, how 145
Hectick, and Cough, how helped 115
Humours that are viscus, how helped 119
Hurts us what, does help also 121
Humidities, how to correct 132
Head Diseases, from Viscosities, how they are help'd 133
Hiccoughs, how relieved 160
Hæmorrhages, how they destroy our Strength, and weaken us 204
 —are caused by the Air, and by what Means 263
 —caused by feeding on too much, or on too spirituous Things, Baths, &c. 264

Hæmorrhages at the Nose, how produced from external Causes 266
 —in malignant Fevers, from whence they happen 316
Hunger is increased and lessened by the Air 274
Henbane-Seed, its Effects 277
Heart, if it wants Spirits, the Brain must want them, and why 202
 —is sometimes too big 313
Heartburn, in Swooning, whence 392

I

Inhabitants of Kent, their Customs 6
 —of Campagna Romana, their Customs *ibid.*
Jellies have Warmth in them; but they are not thin, till melted 51
 —of Oatmeal, their Effects in Asthma's, Vapours, saline States of the Blood, and in keeping the Belly soluble 63
Inflammations, what is proper for them 66
 —of any Kind, what is prejudicial in them, and what Effects are produced by the Abuse of Coffee in them 125
 —of the Stomach, how some Liquors produce it 146
 —are cured by breathing a Vein, and in what Circumstances it fails of having a due Effect 204
 —their Cure intirely depends upon Bleeding, rightly

I N D E X.

- rightly and judiciously managed 207
- Inflammations*, cured by Bleeding, although they should arise from other Causes than Plenitudes *ibid.*
- do not prove the Blood always to stagnate; but only argue its slow Motion *ibid.*
- cannot be cured without Bleeding, as a Cause without which 211
- are mild, or fierce, according to the Nature of the Salts that produce them 321
- Inflammatory* Blood, how it is produced by our Diet 292
- Cases and Diseases do not admit of Wine, or any spirituous Liquors to be made use of in them 377
- Inflam'd* Eyes, what is proper in them 66
- Eyes and Ears, what is proper to help, and disperse the Inflammations of both 118
- Impotence* to Venery, how, and by what introduc'd, and whether this be Fact, and why 102
- Impostumes*, an Observation on them 140
- whence they proceed, and how they are caused 320
- Inky*, chalybeat Waters, are esteemed good and useful in Cold, and all Chronical Diseases and Cases 141
- Iced* Liquors are dangerous, and bring on Chillness, Inflammations of the Stomach, &c. 146
- Imagination*, how it works upon big-bellied Women, and how it prejudices them 172
- Impeded* Motion, how it happens 221
- does not happen from one Cause alone 223
- Interceptive* Bleeding, whether there be such a Thing in Nature 229
- Intemperance* in Brandy and spirituous Liquors, are Causes of Dropsies 258
- Jaundices* differ much, and so do their Causes 269
- whence comes its Latin Name *ibid.*
- how it is to be remedied by Kitchen-Management 270
- Immersion* in cold Water, how it causes a Jaundice 271
- Indigestion* caused by the Air 273
- by Feeding 274
- by Passion 275
- what Diet is proper in it *ibid.*
- Juices* are first affected in Consumptions, if there be no ill Formation of the Lungs 346
- Injuries* done by Opiates in pleuretick Cases and true Pleurifies 378
- Involuntary* Motion of our Muscles, from what Causes it proceeds, and how it is immediately produc'd 414

K

- Kitchen-Physick* is as certain as Drugs 134
- Knowledge* in Physick proceeds from Experience of Particulars,

I N D E X.

- culars, and from sound Reason: Experience ought to precede, and Reason ought to accompany Experience 299
- Kinds* of Fevers, how many, what they are, and from whence they proceed; whether from an Acidity, that causes the Blood to be gross; or from an alcalisate Salt, that causes the Blood to be dissolved 397
- King's Evil*, what it is, &c. 399
- L**
- Laws* make Mankind honest by Custom 4
- Leanness*, by what Means it is caused 30
- how to remedy 69
- what is bad for it 124
- whence it proceeds 257
- Lean* People, how they are made fat 31
- how to make People so 74
- Looseness* of Constitution, how it is help'd 32
- Loosenesses*, what is bad for them 60
- how to cause 70
- Laxatives*, what are 69, 73, 77, 82, 128
- Longest* Life, where, and in whom it is observed 50
- Life*, Persons under a Swoon how they return to it 391
- Leprous* Eruptions, whether it be proper to repel them, and if they are not to be repelled, what is fit to be done 59
- Leprosy* is best help'd by Water-drinking 388
- Lethargies*, how to help 85, 154
- Lungs*, hot, what is improper for them 124
- their Use is to compress and divide the Blood into minute Parts 395
- Limbs* of melancholick People, why they are weak 156
- Laudanum* Opiatum, its Virtues 166
- Lochia*, or Cleansings of Women in Child-bed, are to be encouraged 175
- Labour*, its common Attendants, and why they happen 179
- its common and natural Attendants, what they are 181
- where the Womb is torn by the Midwife, how it is to be remedied, and how the Women are helped 182
- Livers* that are found and good, will bear large Bleedings 232
- Leeches*, their Use in Physick, 236
- Liquor*, in Sweats, when it is to be given to the Patients 240
- Liquors*, which are proper in Pleurifies 377
- if they are cold, have two Effects; namely, they either congeal the Juices, or cause Sweats; and how they effect this 411
- that are taken warm, destroy grumous Blood, and do promote a regular Salivation 425

I N D E X.

Ltmonade is a very common
Occasion of Pleurifies in
the Southern Parts of
France, and elsewhere 267
Loathing, whence it proceeds 243
Lymphatick Vessels, how they
are broken 261
Lienteries, whence they are
caused 276
Lacing strait, to whom it is
prejudicial, and what en-
sues from thence, espe-
cially in Children and Wo-
men 353
Lodgment of Matter, how it
is made in an Abscess of
the Bones 405

M

Madness, in Sailors and Stu-
dents, different 3
—how cured 159
Meltd Water is unwholsome 13
Meconium, in new-born In-
fants, is to be emptied,
and by what Means 36
—in Children, what is un-
derstood by it 188
—why it stops in the Guts
of Children all the Time
their Mothers are with
Child 189
—does often fall into the
Mother's Womb, and
what are the Causes and
Effects of this Case 190
—how to discharge it, and
when this ought to be
done *ibid.*
Middle-Age, why it is most
subject to Diseases 49
—how to manage them-
selves *ibid.*
Montpellier, its Air 56

Millet-Seed is glutinous and
drying 64
Mushrooms, some Cautions a-
gainst them, and how to
prevent Danger from them 72
Mercury, the Herb, its Vir-
tues in Diet 73
Menses, how to procure them
74, 75, 76, 77, 86, 110, 152
—to stop 77
—are stopped by clapping
Cupping - Glasses under
the Breasts 214
—when stop'd, do often
cause a Bleeding in an
Instant 265
—how they are suppressed
by Cold 281
—sometimes so stopp'd as
never to return 282
—how to procure them
regularly 282, 283
—stopp'd by Viscids 282
—their Quantity is nicely
to be observ'd 283
—when they are suppres-
sed, do occasion Con-
sumptions, and in what
Manner 352
—immoderate, how, and
by what Causes they are
produced 417
Melancholy, how caused 77
Melancholick People have weak
Limbs 156
—are generally costive, and
how they are cured 285
—are not to be cajoled or
contradicted 286
Mustard, how it acts in our
Victuals 84
Members frozen by Cold 90
Memory, to strengthen 134
—in what it consists *ibid.*
Medicines, how they are abu-
sed 162
Method,

- Method*, the best of preparing
Opium 164
Mithridate, its Virtues 166
Miscarriages, how they happen from Exercise, and why 171
Milk-Fever, why it happens 180
Milk, of what Parts it is composed 191
 —why it is carried to the Breasts as soon as Children are born 192
 —how much Women afford daily; and prov'd by Arguments 194
 —where it is contained 195
 —Abscess happens from it, how *ibid.*
 —why Pregnants only have it *ibid.*
 —why more after Labour 196
 —how to be managed, if Children do not suck it *ibid.*
Motion of the Blood, changed by Bleeding, and why 209
 —impeded, by what means 221
 —not impeded by one Cause alone 223
 —how long a Body continues in it 267
 —what is required to produce it in muscular Motions 326
 —what it has for its Causes 327
 —resembles common Machinery *ibid.*
 —in Want of it, where the Fault is to be placed 328
 —what Purity is required in the animal Spirits for it *ibid.*
- Motion*, when it persists, and Sense is lost, how it happens 339
 —it, and Sense, both injured, how 340
 —when all Requisites for it are put, then it ensues: What are those Requisites *ibid.*
 —*i. e.* Exercise is forbid in Pleurifies, and why 377
 —of our Juices ceases, by a Loss of the Fluidity of them 391
 —voluntary, and animal, how they are lost 395
 —how hindred by remote Causes 397
 —increases Pain in all inflammatory and other Cases 403
 —involuntary, from what Causes it proceeds 414
Malignity is proved to lodge in the Air, that causes pestilential Fevers 324
Matter, by what Means it is hindred from being produced 371
 —of Pleurifies, is acrimonious 376
 —how it is produced in the Spina Ventosa 404
 —its Lodgment, how made 405
 —of various Colours in the Pimples of the Small Pox, does discover the Nature of the Humour that offends in them 420
 —if green, what it denotes 422
Muriatick Diet produces a Scurvy 384

I N D E X.

- Mass* of Blood, is corrupted from evident Causes 406
 —is necessary for Life, although it be not homogeneous 407
Morbid Matter must be eradicated, to perform any Cure 406
Modes of Passion, are a Secret not to be fathomed by Mankind 410
Management of Persons under the Small Pox 423
- ## N
- North-East Winds* cold and moist, why 9
 —produce Fevers, Fluxes *ibid.*
North-West Winds, cold 52
Necessitous only, suffer from Weather 9
Natural History of Waters, wanted 15
Natural Heat, necessary for Life 50
Nature, what is meant by the Word with Physicians 241
 —when she is strong, or weak 247
 —of Drugs and Diet to be considered by Physicians 280
New Ale, good for what 31
Nourishment, its Conditions 50
 —some do obstruct 68
 —a Caution on it 69
 —cool, what is 72
 —that are cordial 142
Nourishers, what are 67, 76, 107
Nutrition, what is its original Cause in Infants, and proved 187
- Nutrition* is never well performed in acrimonious Bloods, which is only fit to produce Fevers 404
Nourished, how we are 193
Naples, its Situation, and what is concluded from thence 56
Nerves, obstructed, how opened 152
 —affected, are only known by such as are versed in Anatomy 342
Narcotick Steams, how they act 157
Nephritick Pains, of how many Sorts they are, and how they are produced 286
Nurses, who give suck to Children, do often taint their Juices and Blood with the Pox, Scurvy, and other dangerous Diseases 406
- ## O
- Old Men*, whose Spirits fail them, must drink nourishing Liquors, to a Pitch of Mirth 28
Opiates are bad for Children; because their Effects last so long upon them 38
 —in Pleurisies, are injurious, by fixing the Humours, and stopping them, and increasing the Inflammation, and stopping the Respiration 378
 —necessary in the Small-Pox, when the Pimples are quite broke out, and they begin to throb, and be painful 425
Opium,

I N D E X.

- Opium*, why it is so called 155
- why it is eaten by the Turks, in any Danger apprehended 157
 - its Effects, and why 158
 - a Difference between Pain eased by it, and other sulphureous Bodies 158
 - Judgment required to give it 160
 - when mixed with Catharticks, what is to be observed *ibid.*
 - when it is to be given 161
 - when it is to be avoided *ibid.*
 - its Preparations 163
 - how it acts; a Caution upon it, in regard of its Quantity to be given at once, and the Distance of Time between each Dose 278
 - how its Virtues may be destroyed, and how they may be increased; from whence it appears, in what Parts the Virtues of it reside 318, 319
 - is bad in Palsies, and is often an Occasion of them, by the obstructing Qualities in it 334
- Obstructions* are sometimes to be opened with great Caution, and not always by such Remedies as will distend the Vessels 45
- what opens, and in what Manner 73
 - of the Liver, an Observation on it 82
 - hot, how to cure *ibid.*
 - how they are caused, and what is properly called obstructive 144
- Obstructions* of Nerves, how opened 152
- Obstructive* Diet produces Consumptions, by breeding gross and crude Humours, mingled with saline and acrimonious Humours 352
- Oil* of Almonds is made by Expression, and how all other Oils of this Kind are made 67
- Observation* on the Vessels of the Womb 86
- on opening the Menfes 87
 - on Cold, and what the Nature of Cold is; whether privative, or positive 88
 - on frozen Waters 90
 - on Milk, how hindered from curdling 114
 - on the Cause of Hystericks, and how they arise originally from gross Humours obstructed near the Parts of Generation particularly 300
- Opinion*, of Women, as to what big-bellied Women long for 169
- Orifice*, in Bleeding, is to be large, when this is convenient 203
- what Size it ought to be of, and why 220

Palsie P p. 326, 330

Plants partake of the Nature of the Soil where they grow 1

Places where one resides communicate to Mankind both Temperaments and their Passions, Shapes, Wit and Dispositions 2

Potatoes Places, p. 149

I N D E X.

- Places*, which are the wholest to reside in 10
- Prosperity* makes us fat and plump 4
- Providence* is careful over the Health of Mankind, in supplying Equivalents for Deficiencies 14
- Poisons* themselves do not affect robust and strong People 16
- of Mushrooms, how to correct 97
- of Solanum Berries, how to help *ibid.*
- that kill suddenly, what happens to such Persons 312
- united with the Blood, is proved to be the Occasion of pestilential Fevers 323
- Pebbles*, why they are found in the Stomachs of certain Fowls 24
- Perspiration*, how to hinder it, when it is excessive, by Diet, and Liquors of a cool and slimy Nature 26
- in windy Stomachs, is one of the best and most effectual Remedies; because the aerial Parts, of which Wind and that Matter are composed, fly off that Way 43
- when stopt, introduces a long Train of Diseases, such as Pains in Women that are with Child, &c. 177
- what it is, and how caused 408
- the Taste of it *ibid.*
- Phlegmaticks*, who are called such, and what they ought to forbear, lest they fall into Dropsies 28
- Phlegm*, greatly corrected by Pepper 91
- what breeds it 150
- Physick*, whether it ought to be repeated, and how often, according to the Symptoms that require it 34
- how to prevent any Damage ensuing from taking it, when it is found necessary to be given *ibid.*
- of a peculiar Nature and Strength, is convenient for Children once in a Month, for Discharge of their abounding Phlegm heaped up in their little Stomachs 37
- in what its Nature consists 242
- what Symptoms attend the Working of it, and why 243
- what is called strong, and why 245
- why it is slow, or quick *ibid.*
- which Sort gripes most, and how it may be prevented 246
- Cautions in the Use of it *ibid.*
- what Sort to chuse *ibid.*
- finds no Remedy equal to the Bleedings at the Womb in old Women, and why 418
- Physicians* ought to be blamed for their Indolence, in not enquiring more into the abstruse Nature of Remedies they are daily obliged to make use of 139
- different Dispositions of them, and the Author's Opinion

I N D E X.

- Opinion concerning 'em 184
- Physicians*, their Task in the Small-Pox, is either Spurring or Biting the Humours and animal Spirits 424
- Purgatives*, if any of them may be called Specificks 242
- Purging*, when it ensues, and when Catharticks fail in producing their Effect of purging 244
- Purges*, if there be any that can properly be stiled Elective *ibid.*
- Pregnant Women* should be cautious what Sort of Diet they live upon, if they either study their own Safety, or that of their Child they bear within them 36
- are not to be allowed what they like, lest they injure their little ones in the Womb by their excessive Irregularities 169
- may at any time take Laxatives; but Purgatives, properly so call'd, are highly improper for them, for fear they occasion Miscarriages 173
- are to be let Blood, when they advance with Child, lest the excessive Quantity of Blood cause Miscarriages 173
- Poppies*, or any of its Preparations, are hurtful to Children upon many Accounts, and what Injuries ensue from the Use of such Things 37
- Ptisans* are cooling Liquors; but they pall the Stomach, and spoil Digestion 57
- good in sharp Humours, and correct them gently *ibid.*
- Puddings* made up of Wheat Flower, are found of Use in Fluxes of the Belly, and why they are so 61
- Pease* are a windy Diet, and how they are corrected, so as to prevent lasting Colicks ensuing from their Nourishment 64
- Poultises*, to disperse Inflammations 66
- Parts* of human Bodies, how they freeze, and how, or by what Means they are best thaw'd 89
- Proper Materials* to be mixed with windy Diet, to prevent Colicks 91
- Pepper*, a Caution against its too plentiful Use, in Stomachs susceptible of Inflammations, or hot Diseases *ibid.*
- is reputed good in Agues; but Care must be taken, lest it blow an Ague into a continual Fever 94
- Pains* of the Stomach help'd by Bitters and mucous Things mix'd together, where an Acid is the Occasion of them 116
- Pain*, how to alleviate, and how Opium effects this great Work 155, 158
- is often eas'd, altho' no Sleep ensues after its Relief 159

Pain,

I N D E X.

Pain, external, how it is eas'd 160
 —always accompanies Suppuration, and why, and in what Manner it happens 320
 —in the Back or Belly, from whence it proceeds 361

Phrenzies are thrown into convulsive Disorders, and greatly encreas'd, by warm Drugs 119
 —cur'd by Opium, administer'd at a proper Season 159

Putrefaction, how it is prevented by certain Salts, which hinder Fermentations 149
 —is the Parent and original Cause of malignant Fevers 324

Palsies are reliev'd by attenuant Remedies, and why 154
 —what they are, the Causes that produce them, and give them their Degree 326

—spring from the Condition of the Spirits, as their immediate Cause 329

—their Causes enumerated 331

—different Sorts of them 336

—where Sense is lost, but not Motion, the Causes of this Phænomenon 337

—total, from whence *ibid.*

—particular, where Anatomy is of great Service to discover where the Seat of it is 336

Palsies, particular, how to cure them 336

—and Incapacity, their Difference *ibid.*

—in one Part, cause a Convulsion of the antagonist Muscle, and why 340

—their Symptoms 341

—their Signs preceding *ibid.*

—their Seat, how known 342

—when they are dangerous 343

—proper Regimen in them 344

—their Differences 365

—true and bastard, &c. 366

—Difference of Matter spit up 366, 374

—remote Causes of them, and how introduc'd 366

—caus'd frequently by Lemons 367

—their evident Causes 368

—Diet proper in them 376

Plenitudes are abated by taking Blood away from any Part of the Body 199, 231

—what Sort is abated by Bleeding, and what Sort by Fasting and Abstemiousness 201

Passion, when violent, how it endangers a Suffocation, and why 225

—of the Mind are only to be cur'd by Reason interfering 286

Pleurisies, as all Inflammations, require a large Quantity of Blood to be drawn off 230

—cause Consumptions 350

Pleurisy,

I N D E X.

Pleurisy, one of the common-
est Diseases 364
— what properly so call'd
ibid.
— is not every Pain of the
Breast *ibid.*
— Part affected, or its
Seat 365
— describ'd 365, 370
Piles, that bleed, are useful
in the Gravel, and Ne-
phritick Cases 288
Pestilential Fevers arise from
Acrimony of some Kind
or other 304
— their Signs and Symp-
toms 305
— Prognosticks, how be-
token'd 306
— their Blood never con-
geals *ibid.*
Pulse, from whence arises its
Inequality 312
— a Caution in feeling
it in malignant or pesti-
lential Fevers *ibid.*
— from whence its Fre-
quency proceeds 373
— when it ceases, the Re-
spiration also ceases of
Course 395
Palpitation, from what Cause
it springs in pestilential
Fevers 312
Purity of the animal Spirits,
what is requir'd 328
Prognosticks, from what Heads
they are deriv'd 373
Pale Lips, from what Cause
they proceed 396
Probes of the Surgeons are
made rusty by the corro-
ding Acidity of the Mat-
ter lodg'd in the Spina
Ventosa, and how this
happens 400

Pimples of the Small-Pox,
when they appear regular-
ly, what they denote 423

Q

Quantities of hot Things,
what small or large Doses
do 33
— of Blood, exceeding in
our Vessels, naturally
demand the taking off a
large Quantity of Blood,
in order to cure Disor-
ders from its Excess 200
Quenches our Thirst, what
does it 80
Quare's on Bath-Waters 139
Quicksilver injected into the
Aorta, comes out at the
Nipple; which proves that
the Milk in Women comes
from the Blood, and is
Chyle swimming in Blood 194

R

Rules to be observ'd, if we
desire to be healthful 1
Regimen, in Fluxes, what 42
— of Women in Child-bed,
if not observ'd rightly,
Diseases ensue 176
— one of the most effectual
Remedies in all Kinds
of Diseases 250
Rock-Waters do generally
partake of Particles of Mi-
nerals, or, however, of
Stone 16
Rain-Water is the freest of
any foreign Parts of all
other, such particularly as
drops from the Clouds 19

Rain

I N D E X.

- Rain* unstrings our Solids,
and stops our Pores 284
—in Africa, is corrosive,
even to our Linen and
Cloaths 325
- Rice* binds and nourishes:
Some Cautions to be made
use of in taking Rice 62
—its Broth, best for the
White Decoction 63
- Radishes*, how to make them
hotter for eating 74
- Red Powder*, some Observa-
tions on it 95
- Red Threads* observ'd in the
Brains of such as die in
Phrenzies, and what they
are, and what is found in
the Extremities of these
red Threads 291
- Relief* is got by using Reme-
dies opposite to the Cause
of the Disease 122
- Rhenish Wine* is bad for all
Diseases that proceed from
Acidities 128
- Remedies* that are nauseous,
are as bad as a new Dis-
ease to Patients 137
- Revulsion*, in Bleeding, con-
sider'd 211
—impossible, in one Sense;
but how it is understood
by Physicians 212
—how, and in what Place
it is to be made *ibid.*
—an Example of it *ibid.*
—practis'd by Country-
men 213
—more Examples, and
why 214
—when to be chang'd *ibid.*
—one of its Rules *ibid.*
- Rashness* to be avoided by
Physicians 234
- Resinous Purges*, how they
are weaken'd 246
- Retentions* cause the Blood to
find out other Passages 268
- Round Worms*, where they
are found 255
- Ravings*, from what Causes
they proceed 318
- Requisites* to Motion, what
they are 340
- Rotten Bones*, from whence
they proceed 399
- Remarks* on the Number of
Small-Pox in the Face, and
why 422
- S**
- Sage* — — — 173
- Shapes* of our Bodies are
given to us by the Places
we reside at 2
- Sailors*, courageous, and why
3
—are costive; how they
may be cur'd 17
- Sea-Sickness*, how to prevent
18
- Sea-Air*, whether it be good
against Consumptions 55
- Sea-Salt*, in our Blood 147
- Students* generally fearful, and
why 3
- Seasons* of the Year, which
are the most unwholesome,
10
- Situation*, for living in, which
is the best 21
—which is best for a Phy-
sician 22
- Seats* and Seasons, unwhol-
some or good, for the same
Causes *ibid.*
- Salt Springs* cure Costiveness
and Phlegm 17
- Salt Meats*, why they occa-
sion Costiveness, and yet
salt Water loosens 17
- Salt Water*, how to freshen
19
- Salt*

I N D E X.

- Salt* of Cabbages, is caustick 73
- Salt* produces the Scurvy 147
- is laxative *ibid.*
 - to correct 148
 - causes a Stiffness of our Joints *ibid.*
 - promotes Venery, is digestive, diuretick *ibid.*
 - Scorbutick Pains help'd by it 149
 - Scabs, makes them scale off *ibid.*
- Salts* in our Urine, are Cylinders, &c. 382
- the Cause of our Scurvies 383
- Sweet Waters*, wholsome, and why 20
- Sweet Wines*, their Harm, and why 129
- cause Fevers, and why *ibid.*
- Standing Waters* are bad 20
- Stools*, how to procure without taking any thing 22
- Small Liquors* are unwholsome in Winter, and wherefore they are so 23
- South Winds*, their Effects on human Bodies 53
- beyond the Tropicks, are cold, &c. 54
 - thro' the Sea, their Effects *ibid.*
- Sham Asses Milk*, what now us'd 57
- Scales*, how taken off. 58
- Starch*, its Effects, when taken 62
- from what it is made 149
- Solid Water-Gruel* 64
- Scurvy*, how to help 65, 74
- the cold, to help 76
 - what is good against a certain Kind 84, 111
- Scurvy*, mentioned in the Days of Hippocrates, and what its Names, &c. 379
- what Acrimony it springs from *ibid.*
 - its Cure in general 388
 - its various Sorts, Seat 380, 381
 - by what Accidents in Life, bred 384
 - its Prognosticks 387
 - Sea-Air breeds it 388
 - how caus'd and cur'd *ibid.*
- Slime* of the Stomach, to carry off 69
- Swell* the Stomach 71
- Sugar*, its Effects 78
- how to prevent its Harms 79
 - Hystericks hurt by it *ibid.*
 - Caution against it *ibid.*
 - Convulsions caus'd by it *ibid.*
 - highly prais'd by a modern Physician; but it is prejudicial 385
- Spleen* hurts 78
- how to help 150
- Sleep*, to procure by Diet 82
- whether producible by Lettuce Water 83
 - why it is hinder'd 107
 - how caus'd and prevented 120, 143
 - and Watching caus'd by one and the same Drug, and how 120
 - banish'd by Thea, and why 132
 - to procure; what Sleep is 155
 - is regulated by Custom 173
 - is necessary in Child-bed Women 175
- Sleep,*

I N D E X.

- Sleep*, when not to be encouraged in Women in Child-bed 177
 —produces a Grossness in our Juices 369
Sleepy Diseases, when they happen; at what Age they happen 277
Sleepiness happens from Fevers 279, 318
 —how remedied by Externals 280
 —in our Limbs, whence 339
Stomach, relax'd, how to help it 85
 —how to abate 146
Stomachick, what is, and why 135
Sourness, of the cold Sort, to help 92, 135
 —Caution in correcting it 92
 —whence it arises *ibid.*
 Boerhaave upon it 93
Sour Wines, how sophistified 129
Smoakiness, in Sign, what it denotes 101
Seminal Matter, not thick naturally *ibid.*
Stagnation, what relieves it 112
Spirits, how to recruit 114
 —their Office 241
 —are consum'd by Troubles, and how 284
 —are oppress'd with too much Water 296
 —are disturb'd, upon Matter deprav'd 381
Spitting of Blood, what is prejudicial to it 123
 —how help'd 137
 —has two Seasons, and how to obviolate them 266
Spitting, in Pleurifies, if early, what is to be gather'd from thence 375
Small Wines hurt the Nerves, and why 129
Small-Pox, their Name, Symptoms 420
Spaw-Water, its Virtues 141
Steel Waters, their Effects *ibid.*
Sharp Juices, how to sheathe 149
Stone not caus'd by Hops or Barley 150
Scorbuticks bear Ale 151
Scabb'd Heads, to help *ibid.*
Surgeons, what they observe in relation to Opium in Abscesses 161
Sayings of Sylvius and Plate-rus 162
Sitting is bad for Women with Child 172
Sweats, in Puerperals, are useful 175
 —are not to be procur'd indifferently 237
 —where they are useful *ibid.*
 —how known to be useful 238
 —what Sort of such Drugs proper *ibid.*
 —sometimes to be hastily given 239
 —in external Pleurifies, are good *ibid.*
 —not to be taken without Liquor; when that is to be given 240
Sweat, how it is caus'd 313
 —is never natural 314
 —what Salts raise it *ibid.*
 —which are hopeful 315
 —ensue, Diureticks not working 409

I N D E X.

<i>Heat</i> promoted, how, and by what Means, &c.	409, 410, 412	<i>Spina Ventosa</i> turns fistulous, and why	404
<i>Symptoms</i> of puerperal Women	178	<i>Sun</i> , what it is	410
<i>Size</i> of Women and their Spouses to be regarded, and what is to be done	181	<i>Shatter'd Bones</i> cause Convulsions	416
<i>Tickling</i> of the Secundine, how prevented	182	<i>Service</i> , what is done by this Book	426
<i>Serum</i> discharg'd, strengthens the Solids	276	T	
<i>Swoons</i> , how to produce	281	<i>Thames Water</i> , its Properties	18
<i>Sultry Weather</i> jellies our Serum, and what happens from thence	291	<i>Tenderness</i> , how help'd	27
<i>Suppressions</i> cause Frenzies	292	<i>Thickness</i> of Victuals, is prejudicial to Childrens Diseases	39
<i>Spasmodick Pains</i> , whence	301	<i>Thinness</i> , in what it is plac'd	50
— are intolerable	415	— necessary for Life	<i>ibid.</i>
<i>Spasms</i> cur'd, how	417	<i>Thirsty</i> and dry Constitutions, their Management	43
<i>Signs</i> of an alkaline and acid Salt, prov'd	322	<i>Thirst</i> , from Liquor, how best help'd	82
<i>Spots</i> , whence, and how communicated	322, 323	— how caus'd	307
<i>Slow Fevers</i> , in Consumptions, whence	354	<i>Travellers</i> into a cold Country, what they are to do to avoid the Inconveniences	53
<i>Stimulus</i> , the original Cause of a Pleurisy, and in what Manner it is introduc'd	367	<i>Teeth</i> , what hurts them	78
<i>Secretions</i> , if flow, their Effects	387	— cause Convulsions in Children	416
<i>Sadness</i> rivets the Scurvy	<i>ibid.</i>	<i>Thrushes</i> , what is good for them, and how	81
<i>Swooning</i> , what it is, its Effects, its Subject, &c.	389	— a Caution on them, and how to help them	<i>ibid.</i>
— surprizing how People ever survive it	390	— from Acidity	308
— Sense abolish'd, how	394	<i>Trembling</i> , what causes it, and how	103
— Sweats, cold, whence	395	<i>Thea</i> , what Parts it consists of	131
— to prevent it in all Constitutions	392	— why only to be infus'd	<i>ibid.</i>
<i>Spina Ventosa</i> , how distinguish'd from a Caries	400	— its Abuses, its Virtues	<i>ibid.</i>
— whence it proceeds	401	— if abus'd, what it causes	136
— its Symptoms not early known	402	<i>Tickling Coughs</i> help'd	<i>ibid.</i>

I N D E X.

Tempering Juices, when to be us'd, and why 152
Tremble, in Frights, why we do so 222
Terror, why it strikes Men dumb and palsical 335
 — causes Convulsions 415
Transfusion, of what Use 236
Thoughtfulness, how to be avoided, &c. 294
Tubes Dorsalis, whence it proceeds 335
Tendons, wounded, cause Convulsions, how 416

V

Viscids are windy, and why 25
Viscidities, to correct 75
Viscous Humours in the Head, how help'd 119
Vomits, bad when, and why 35
Vomitings help'd 160
 — whence in Fevers 309
Volatiles, in Diet, to prevent Fits 37
 — do sometimes mount last up 105
Volatile Salts, too strong, are caustick and hurtful 317
 — Drowsiness from them 319
 — procure Sweats 412
Venice Treacle 38, 165
Urine, what provokes 74, 76
 — is to be regarded in Pleurifies 375
 — is prov'd to be a Murinatick, or a mix'd Salt 408
Venery, how it is abated 101
Voice, to strengthen 113
Vapours help'd, in what Manner, and why 136
Vessels of Hystericks, what happens to them 262

Vessels are thinner or thicker, as they are more or less full of Liquors 371
Union of Salts greatest, where they are purest 314
Vertigo, or Giddiness, whence 394

W

Water-Mint and the Garden-Mint, differ in their Virtues 2
Water, of any Sort, has Sea-Salt in it — 5
 — prejudicial to fat People *ibid.*
 — partakes of the Soil it runs through 8
 — melted, is unwholesome 13
 — has an inimitable Pertness in it, and which is lost by keeping *ibid.*
 — its Ingredients are to be well examin'd into, if we would avoid Diseases 15
 — from Stone, its Effects 16
Waters, Strong, are not proper Preventives of malignant Fevers 316
Warm Weather, in what Cases good or bad 11
Warm and wet Spring, wholesome 13
Warm Cloathing, how it promotes Perspiration 411
Warm Liquors destroy Coagulations, and promote a regular Salivation 425
Warmth natural, if abated by Accidents, what is to be then done 51
 — and Drought, their Effects on our Fibres 56

Warmth

I N D E X.

<i>Warmth</i> is necessary in the		<i>Worms</i> , the Cause of them	
Small Pox	424	is not Putrefaction, as has	
<i>Weakness</i> , how discover'd	27	been suppos'd	251
—from Embraces, how		—how bred in us	253
help'd	144	—their remote Causes	254
—of Pulse, whence	394	—small and broad, where	
<i>Weight</i> of Bodies, when in-		found	255
creas'd	27	—how destroy'd	256
<i>Windy</i> , what is reputed such		— a Caution concerning	
	36	them	<i>ibid.</i>
<i>Wind</i> , good against	97, 109	<i>Wasting</i> , in Consumptions,	
<i>Win</i> , good in weak Consti-		whence	354
tutions, and in Phlegma-		<i>Wasting</i> away, in Abscesses,	
ticks	39	why	405
—the various Sorts, their		<i>Watching</i> , whether good in	
Effects	127, & seq.	Pleurifies	378
<i>Whites</i> , to know by Womens		<i>Womb</i> - Vessels, how they	
Colour whether they have		bleed, and by what Cau-	
them, or not	40	ses	418
—what Diet and Regimen		<i>Women</i> , that are subject to	
good in them	<i>ibid.</i>	bleed at the Womb, must	
—their Consequence, good		observe a certain Posture	
against	98		414
<i>Wheat</i> , its Effects	60	Y	
<i>Wormwood</i> , an Observation		<i>Year</i> , the fortieth, dangerous	
on it	104		48
<i>Worms</i> , good against them		<i>Yawning</i> , whence, in Swoons	
	109		392

F I N I S.

